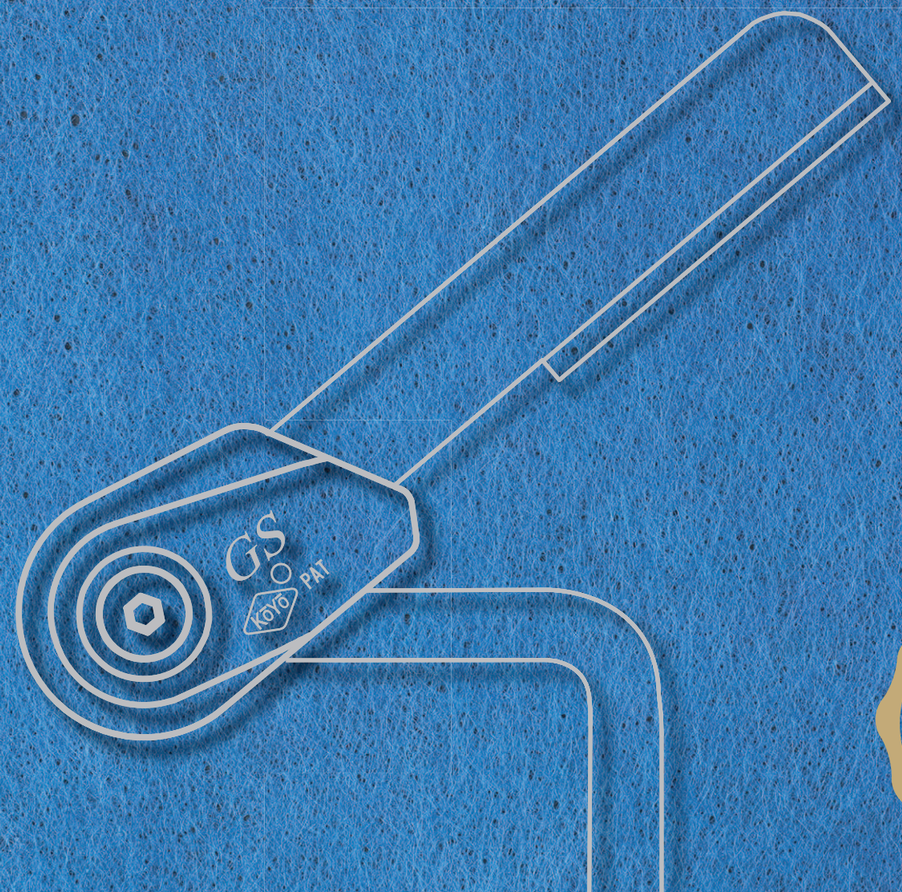
Heart & Technology

Craftsmanship with Heart & Technology

KOYO Catalogue Rev.6.1

Heart & Technology

The original solution for your sofa
Catalogue Rev.6.1



JAPAN QUALITY

The KOYO Philosophy

KOYO was established in 1926 and started to manufacture a wide variety of functional components that make the furniture and equipment we use today more user-friendly. Our mission is to blend Heart and Technology to make a contribution to global markets through a corporate focus on human values, developing products of superior quality and safety. We will continue to work hard to win the trust and respect of our customers and our partners all over the world.



Craftsmanship with Heart & Tec hnology





P.03-04 JAPAN QUALITY

P.05-06 Product Spec List

P.07-10 GS Gear

P.11-12 FH

P.13-16 α Gear

P.17-20 LS Gear 100N·m

P.21-24 LS Gear 200N·m

P.25-26 LS Gear 300N·m

P.27-30 Sound Zero

P.31-36 IS Gear 250N·m

P.37-40 IS Gear 450N·m

P.41-44 Stretch

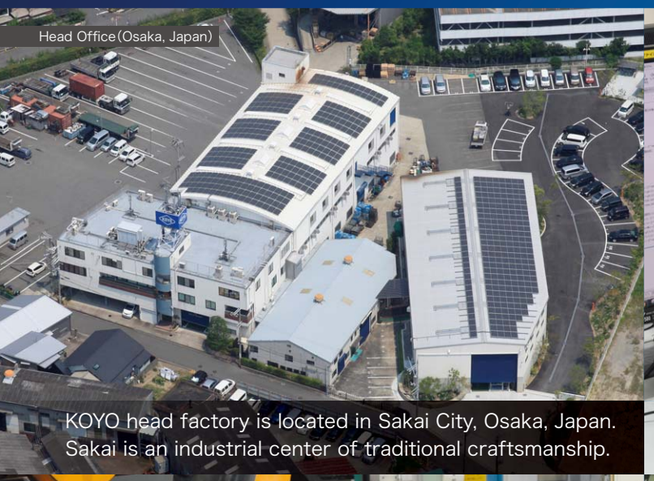
P.45-48 EL Series

P.49 Joint

Heart & Technology

JAPAN QUALITY

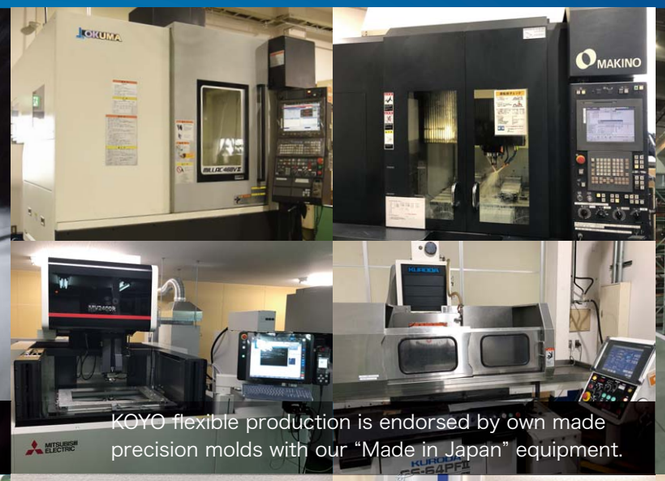
KOYO has been improving our production efficiency and our quality standard based on our Kaizen, 5S (Seiri, Seiton, Seisou, Seiketsu, Shitsuke) principles.
We are to make our best efforts to supply our products throughout the world.


Head Office (Osaka, Japan)

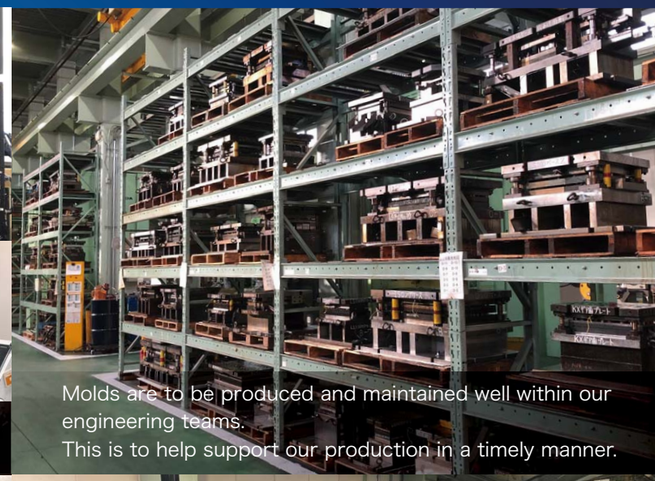
KOYO head factory is located in Sakai City, Osaka, Japan.
Sakai is an industrial center of traditional craftsmanship.



Our core planning, development, and evaluation are concentrated at our Japan factory.



KOYO flexible production is endorsed by own made precision molds with our “Made in Japan” equipment.



Molds are to be produced and maintained well within our engineering teams.
This is to help support our production in a timely manner.



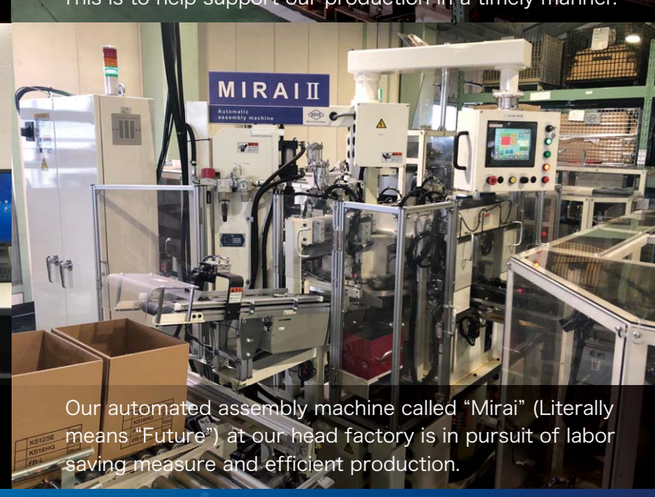
Our products have been made of Japanese selected high tension steel.



Our newest servo-press machines realized the most efficient stamping process.



At our quality department, critical dimensions are to be inspected by ultra-precision machine and 3D image measuring equipment.



Our automated assembly machine called “Mirai” (Literally means “Future”) at our head factory is in pursuit of labor saving measure and efficient production.


China Factory (Guangdong)


Vietnam Factory (Hanoi)

**The labor oriented assembly process is to be completed at our China and Vietnam factories.
Overseas facilities are managed and operated by members of the KOYO head office and established delivery system according to any needs around the world.**

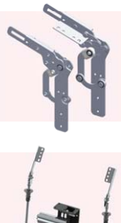
(Assembly line at Vietnam Factory)



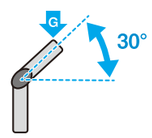
Quality control management system, based on ISO 9001

Product Spec List

Product	Feature	Strength (N·m)	Steps	Pitch	Range of movement	Repetition	Socket	Spring	Stretchable (mm)
 GS P.07–10	GS	90	Free	—	48° I 120°	10,000	○	○	—
 FH P.11–12	Friction	2•8	Free	—	255°	10,000	—	—	—
 LS200α P.13–16	αGear	200	24 I 60	2°	48° I 120°	50,000	○	—	—
 LS100-MP P.17–20	Micro Pitch +Compact	100	10 I 40	3°	30° I 120°	50,000	○	○	—
 LS200-MP P.21–24	Micro Pitch	200	15 I 60	2°	30° I 120°	50,000	○	○	—
 LS300-MP P.25–26	Micro Pitch +Strong	300	15 I 60	2°	30° I 120°	50,000	○	—	—
 ST250 P.27–30	SOUND zero	220	15 I 60	2°	30° I 120°	10,000	○	○	—
 IS250 P.31–36	Fine Pitch	250	5 I 15	6°	30° I 90°	10,000	○	○	—
 IS450Y P.37–40	Fine Pitch +Strong	450	5 I 15	6°	30° I 90°	10,000	—	○	—
 IS150T P.41	Fine Pitch +50mm Stretch	150	15	6°	90°	10,000	○	○	50

Product	Feature	Strength (N·m)	Steps	Pitch	Range of movement	Repetition	Socket	Spring	Stretchable (mm)
 IS150LT P.41	Fine Pitch +80mm Stretch	150	15	6°	90°	10,000	—	○	80
 LS100-MP-TR P.43	Micro Pitch +50mm Stretch	100	40	3°	120°	20,000	—	○	50
 LS100-MP-LT P.43	Micro Pitch +80mm Stretch	100	40	3°	120°	20,000	—	○	80
 EL-02H P.45–46	Motorized +Stretch for headrest	—	Free	—	116°	—	—	—	80
 MA-02H P.46	Manual +Stretch for headrest	100×2Pcs	30	—	100°	50,000	—	—	76
 EL-03H P.47–48	Motor lift +Angle adjustment for headrest	—	Selective	Selective	Selective	—	—	—	—
 MS-2 P.49	Detachable	—	—	—	—	—	—	—	—

※ As our standard measure, we are applying a load to the tip of the product at an angle of 30 degree.



1. Many of our products are patented in Japan, and some of our products are also patented in major global markets. Our trademark is registered not only in Japan but also in major global markets.
2. Dimensional data not binding.
   We reserve the right to alter specifications without prior notice.
3. Our warranty and liability is governed by the statutory provisions, however, subject to the following: Warranty and liability is excluded in the event of improper use and processing of the products (e.g. by shortening or welding the fittings).

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

GS

Stepless/Torque Limiter

GS



Packing Spec

Sets / Carton	15
Weight / Set	0.76kg
Weight / Carton	11.8kg
L×W×H/Carton(mm)	250x330x150

Model Name GS-ER90L-32AF

- GS: Series
- ER: Emergency Recovery
- 90L: Movable Range
- 32AF: Base Type + Arm Type

Noiseless Gear



No click sound expands the possibility of functional sofas.

ER Function
(Emergency Recovery Function)

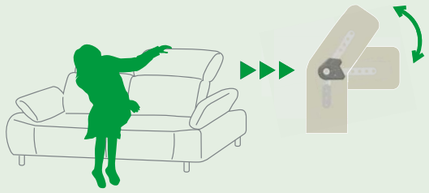


In emergency, the torque limiter enables the overload to be released and prevents the fitting from a malfunction.
※Please avoid from constant ER operation within a short time.

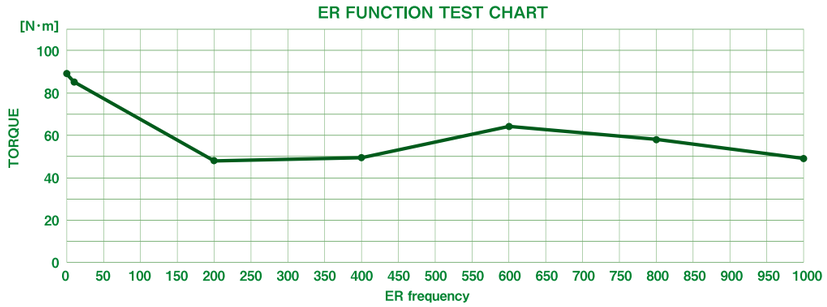
Stepless Gear



Repetition

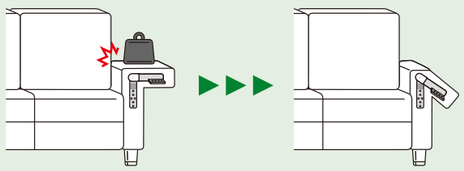


More than 10,000 cycles
*For simple repetition.



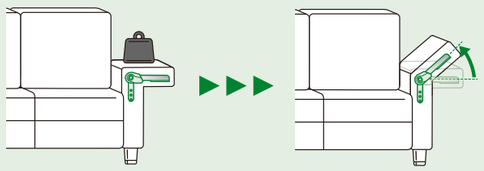
※The upper graph shows an average of 30 samples measured at every 200 cycles.
※Please avoid continued ER operation in a short period of time.
※We will not guarantee ER function after using 1,000 times or more.
※Please use it as a reference value only.

Conventional Gear



Broken — Non-adjustable

GS-ER Gear

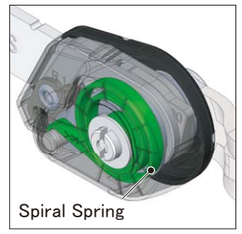


Unbreakable — Re-adjustable

Spring Type

Model Name GS(S)-ER90I-A180

- GS(S): Series
- ER: Emergency Recovery
- 90I: Movable Range
- A180: Base Type + Arm Type

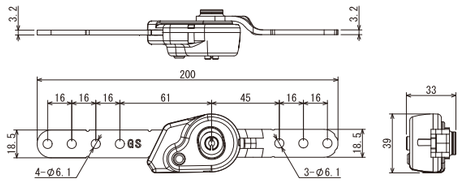


Specification

GS(S)-ER90I-A180

Finish : Unichrome plating



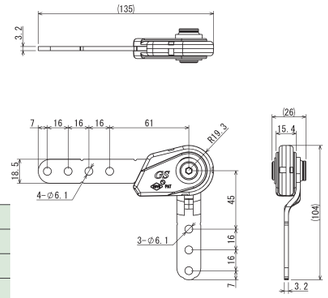


Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Specification

GS90-ER90I-A90



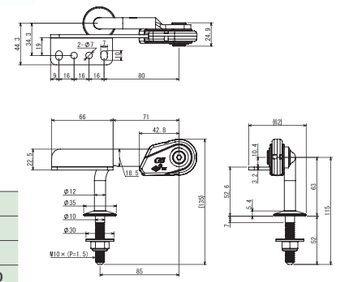


Packing Spec

Sets / Carton	40
Weight / Set	0.34kg
Weight / Carton	13.5kg
L×W×H/Carton(mm)	250×330×150

GS-ER90L-32AF

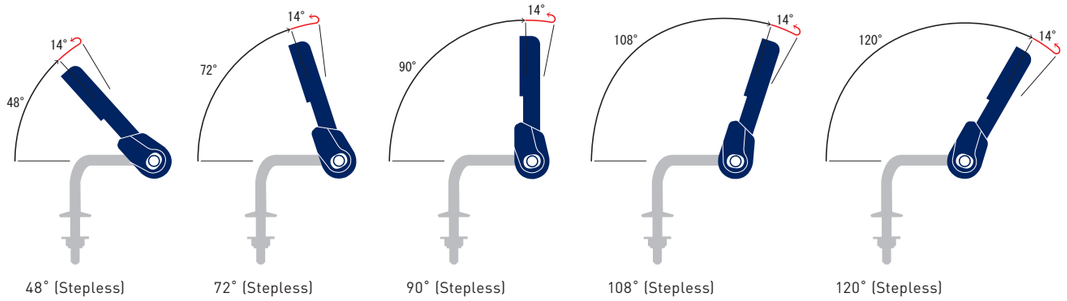




Packing Spec

Sets / Carton	15
Weight / Set	0.76kg
Weight / Carton	11.8kg
L×W×H/Carton(mm)	250x330x150

Movable Range



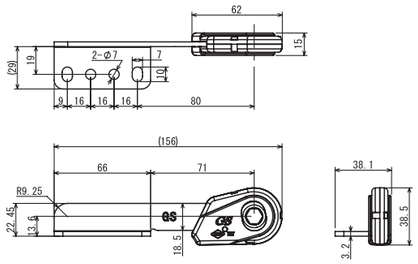
48° (Stepless) 72° (Stepless) 90° (Stepless) 108° (Stepless) 120° (Stepless)

Bases

L-type

Finish : Unichrome plating

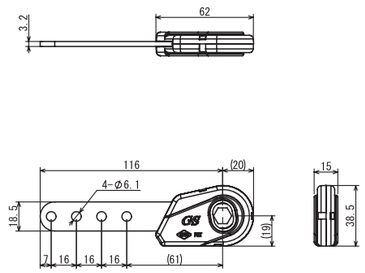




I-type

Finish : Unichrome plating

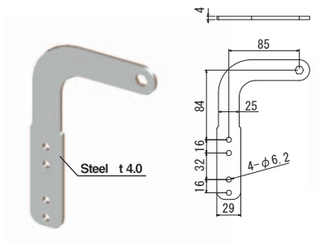




Arms

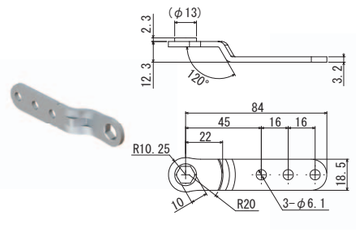
No.10

Finish : Chrome plating



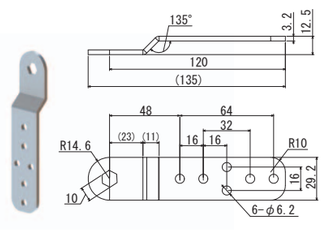
No.A

Finish : Unichrome plating



No.15

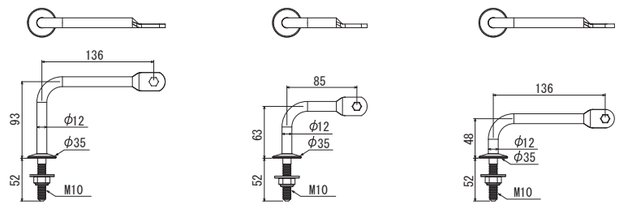
Finish : Unichrome plating



No.31AF～33AF

Finish : Chrome plating

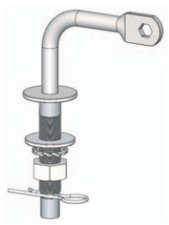


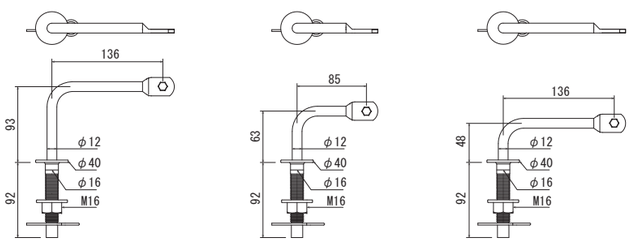


No.31AF No.32AF No.33AF

No.31B～33B

Finish : Chrome plating

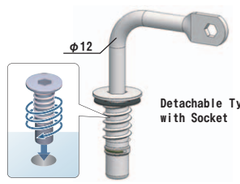


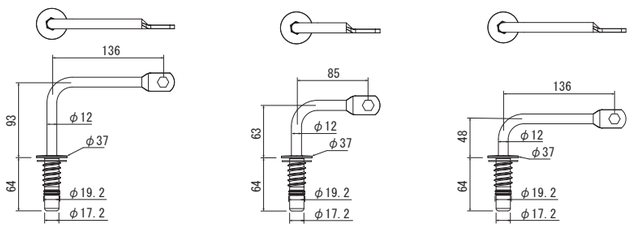


No.31B No.32B No.33B

No.31G～33G

Finish : Chrome plating





No.31G No.32G No.33G

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Stepless/2～8(N·m)

FH



Packing Spec

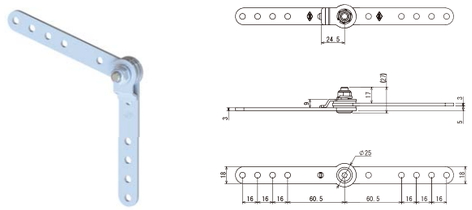
Sets / Carton	50
Weight / Set	0.36kg
Weight / Carton	17.9kg
L×W×H/Carton(mm)	260x325x200

Model Name FH02-L
(Torque: 02 · Series: FH · Type: L)

Specification

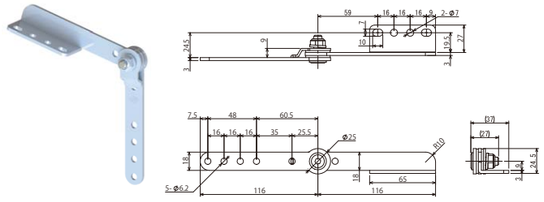
I-type

Finish : Unichrome plating



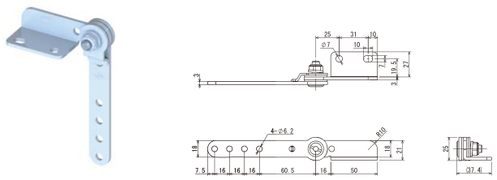
L-type

Finish : Unichrome plating



L Short type

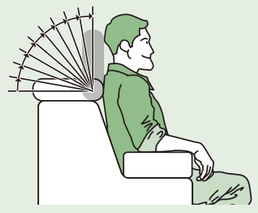
Finish : Unichrome plating



Model Name	Torque
FH02-I	(2N·m)
FH02-L	(2N·m)
FH08-I	(8N·m)
FH08-L	(8N·m)

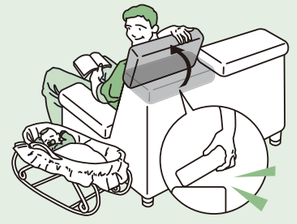
※Initial torque setting at the time of shipment from the factory.

Stepless

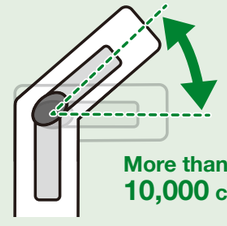


Stepless adjustment ensures better fit.

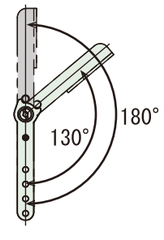
Noiseless



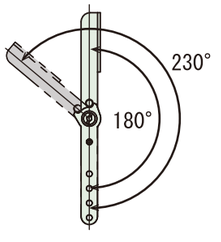
Repetition



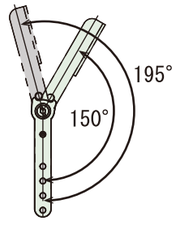
Movable Range



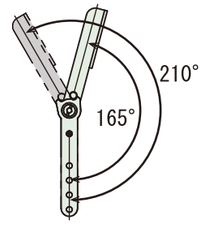
FH00-L(130-180)



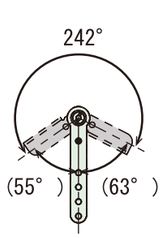
FH00-L(180-230)



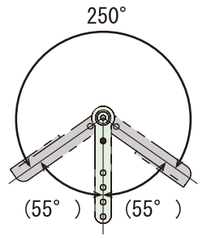
FH00-L(150-195)



FH00-L(165-210)



FH00-L(S)



FH00-L



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Micro Pitch/200(N·m)/ Free-Lock

LS200α



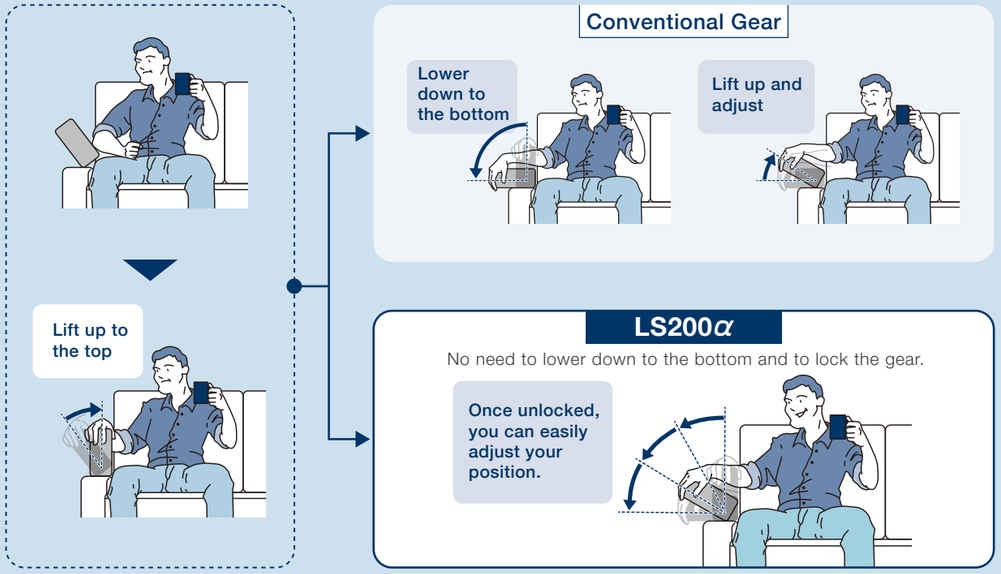
Packing Spec

Sets / Carton	15
Weight / Set	0.92kg
Weight / Carton	14.3kg
L×W×H/Carton(mm)	250×330×160

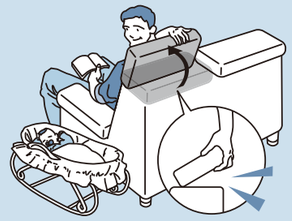
Model Name LS200α-90L-32AF
(Series: LS200α; Movable Range: 90; Base Type: L; Arm Type: 32AF)



Innovative Free-Lock Mechanism



Quieter Click



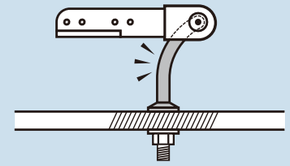
Operational noise is minimized.

Fit



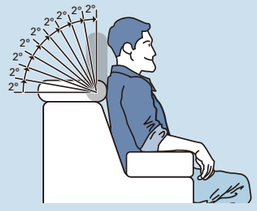
No concern about urethane thickness needed, easier to design the sofa

Flexibility



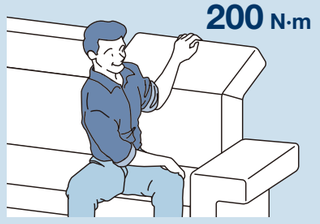
Still functional even after any possible deformation in use

Micro Pitch

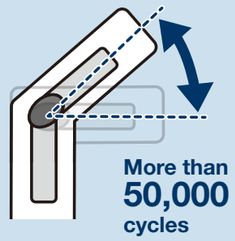


2° ultra fine pitch gear ensures better fit.

Durability



Repetition

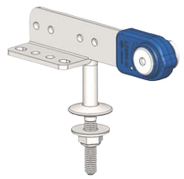


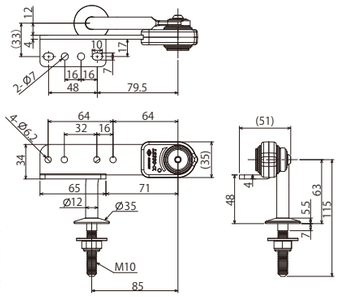
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Model Name LS200α-90L-32AF
(Base Type: 90L; Series: LS200α; Movable Range: 90L; Arm Type: 32AF)

Specification

LS200α-90L-32AF

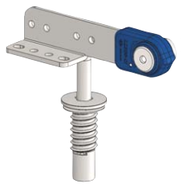


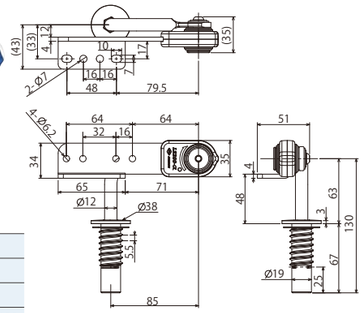


Packing Spec

Sets / Carton	15
Weight / Set	0.92kg
Weight / Carton	14.3kg
L×W×H/Carton(mm)	250×330×160

LS200α-90L-32G

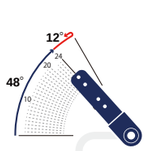




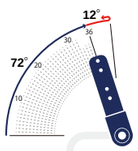
Packing Spec

Sets / Carton	15
Weight / Set	1.09kg
Weight / Carton	16.8kg
L×W×H/Carton(mm)	250×330×160

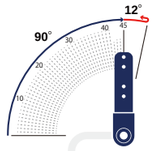
Gear Steps with Movable Range



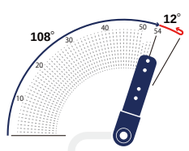
48° (24 steps)



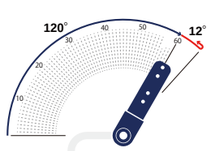
72° (36 steps)



90° (45 steps)



108° (54 steps)



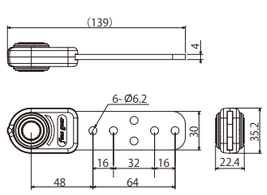
120° (60 steps)

Bases

I-type

Finish : Unichrome plating

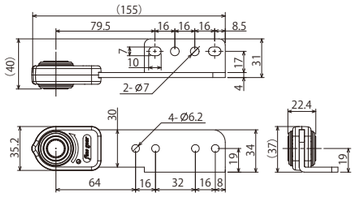




L-type

Finish : Unichrome plating

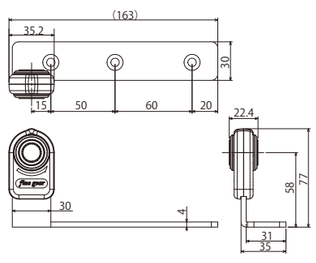




Z-type

Finish : Unichrome plating

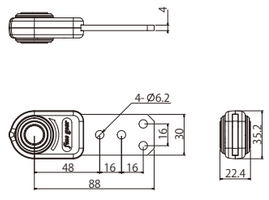




IC-type

Finish : Unichrome plating

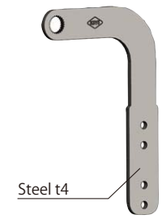


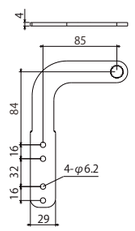


Arms

No.10

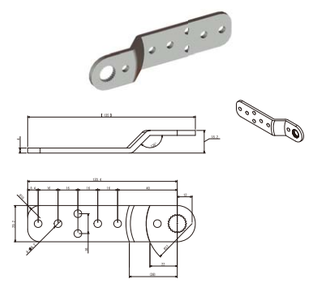
Finish : Chrome plating





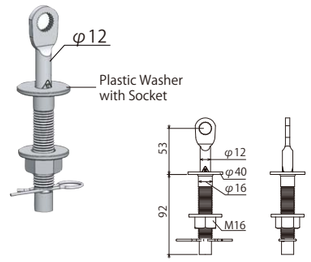
No.15

Finish : Unichrome plating

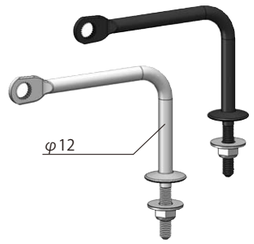


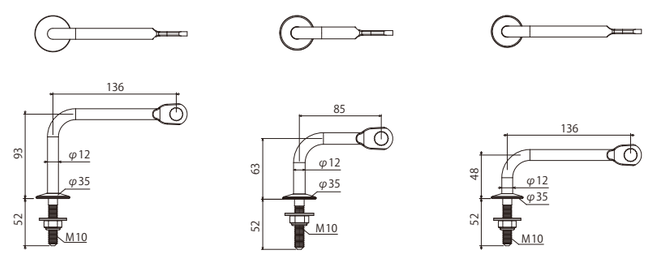
No.40B

Finish : Unichrome plating



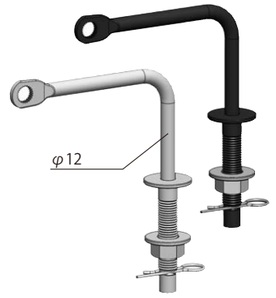
No.31AF～33AF

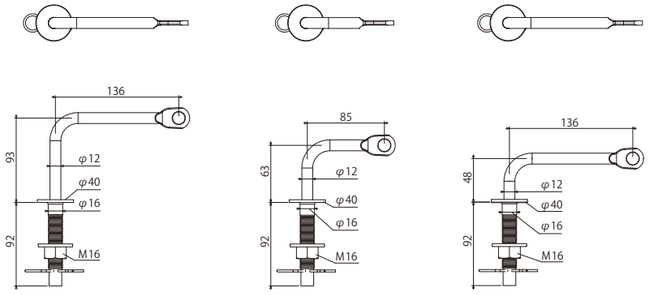




Chrome plating	No.31AF	No.32AF	No.33AF
Black finishing	No.31AF (MBK)	No.32AF (MBK)	No.33AF (MBK)

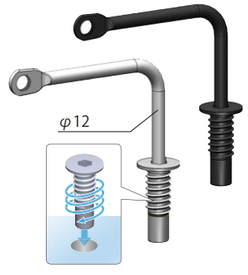
No.31B～33B

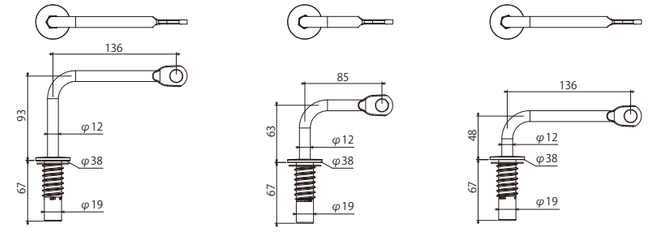




Chrome plating	No.31B	No.32B	No.33B
Black finishing	No.31B (MBK)	No.32B (MBK)	No.33B (MBK)

No.31G～33G





Chrome plating	No.31G	No.32G	No.33G
Black finishing	No.31G (MBK)	No.32G (MBK)	No.33G (MBK)

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Micro Pitch/100(N·m)

LS100-MP



Packing Spec

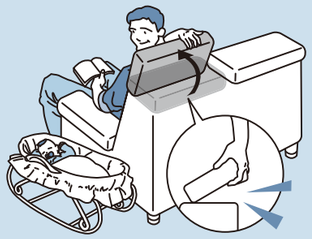
Sets / Carton	15
Weight / Set	0.56kg
Weight / Carton	9kg
L×W×H/Carton(mm)	250×330×150

Model Name LS100-MP90L-30A

- LS100 — Series
- MP — Micro Pitch
- 90 — Movaable Range
- L — Base Type
- 30A — Arm Type

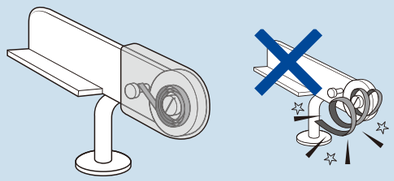


Quieter Click



Operational noise is minimized.

Protected by Safety Plastic Cover



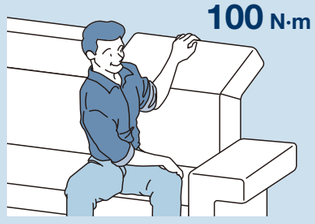
Safety design never to expose the inner parts outside

Micro Pitch

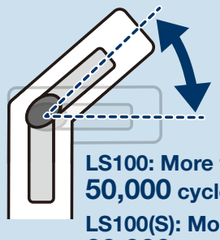


3° ultra fine pitch gear ensures better fit.

Durability



Repetition



LS100: More than 50,000 cycles

LS100(S): More than 20,000 cycles

Spring Type

Model Name LS100(S)-MP72I-A180

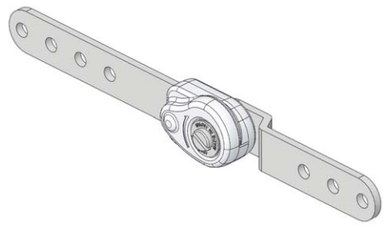
- LS100(S) — Series
- MP — Micro Pitch
- 72 — Movable Range
- I — Base Type
- A180 — Arm Type



Specification

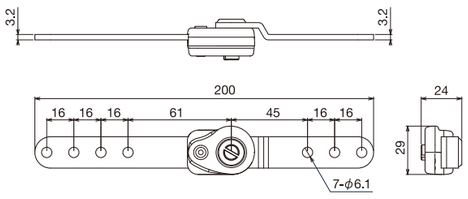
LS100(S)-MP72I-A180

Finish : Unichrome plating



Packing Spec

Sets / Carton	50
Weight / Set	0.26kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150

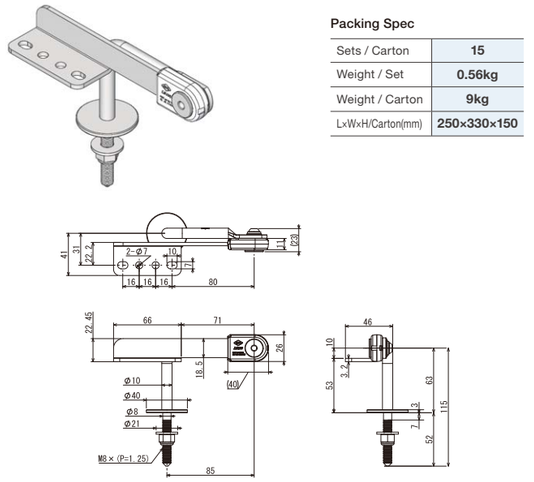


Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Model Name LS100-MP90L-30A
(Micro Pitch: MP; Base Type: 90L; Series: LS100; Movable Range: 30; Arm Type: A)

Specification

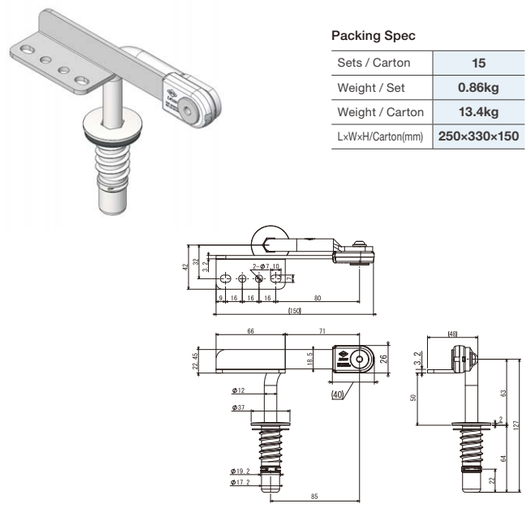
LS100-MP90L-30A



Packing Spec

Sets / Carton	15
Weight / Set	0.56kg
Weight / Carton	9kg
L×W×H/Carton(mm)	250×330×150

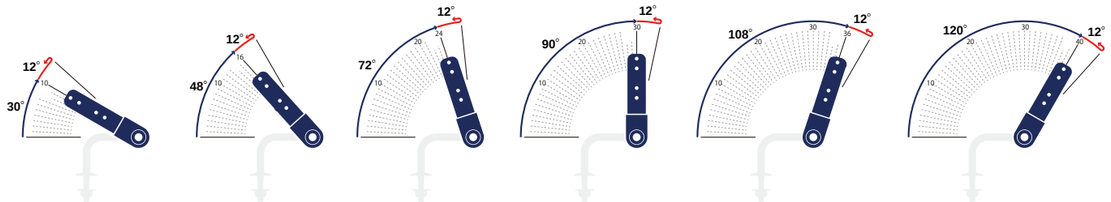
LS100-MP90L-32G



Packing Spec

Sets / Carton	15
Weight / Set	0.86kg
Weight / Carton	13.4kg
L×W×H/Carton(mm)	250×330×150

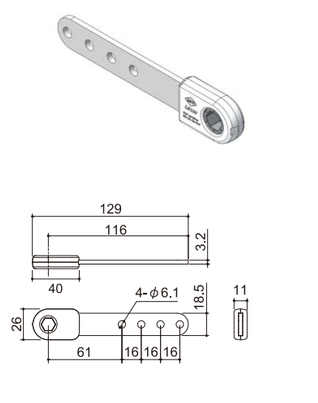
Gear Steps with Movable Range



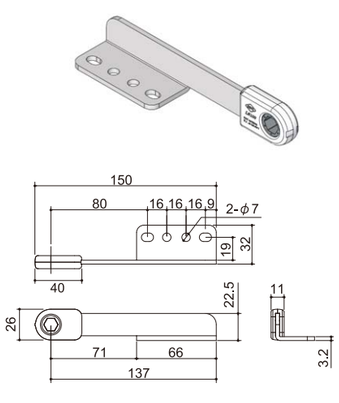
30° (10 steps) 48° (16 steps) 72° (24 steps) 90° (30 steps) 108° (36 steps) 120° (40 steps)

Bases

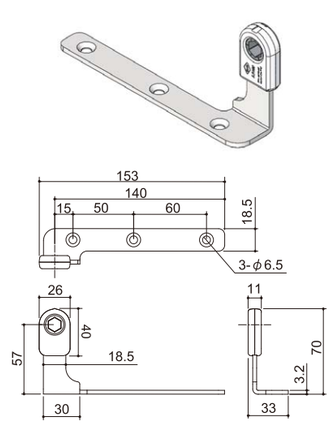
I-type
Finish : Unichrome plating



L-type
Finish : Unichrome plating

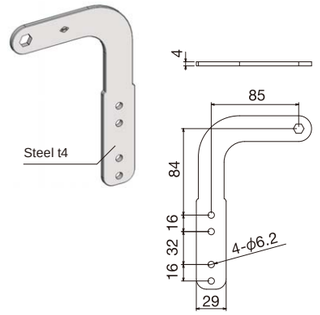


Z-type
Finish : Unichrome plating

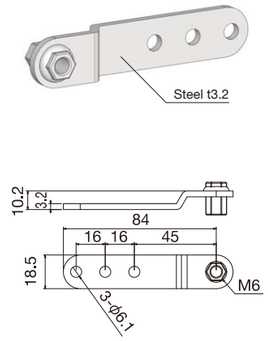


Arms

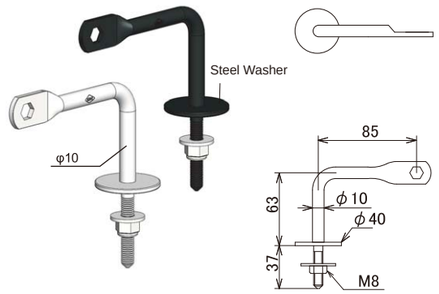
No.10
Finish : Chrome plating



No. A
Finish : Unichrome plating

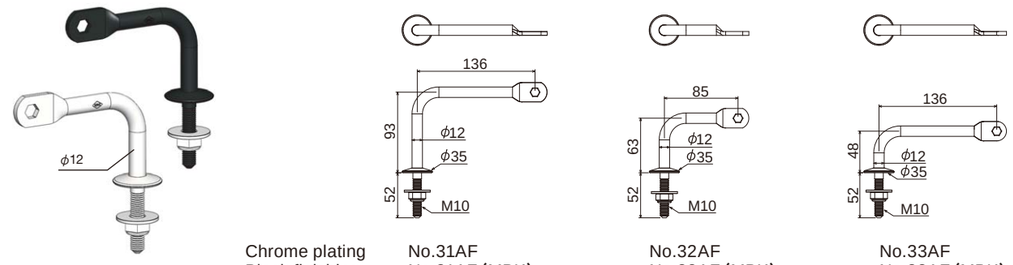


No. 30A
※ Shaft φ10



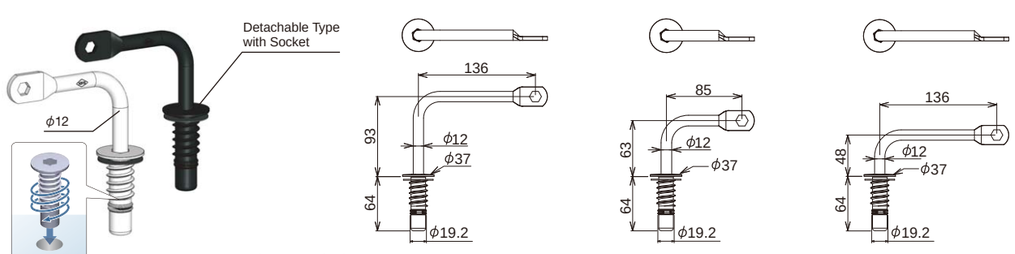
Chrome plating — No.30A
Black finishing — No.30A (MBK)

No. 31AF～33AF



Chrome plating — No.31AF — No.32AF — No.33AF
Black finishing — No.31AF (MBK) — No.32AF (MBK) — No.33AF (MBK)

No. 31G～33G

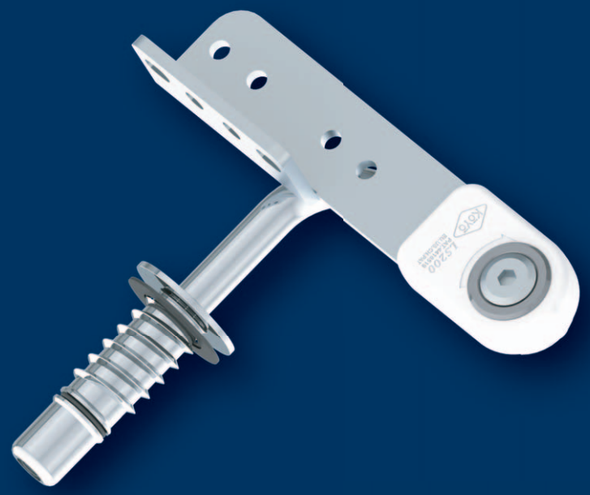


Chrome plating — No.31G — No.32G — No.33G
Black finishing — No.31G (MBK) — No.32G (MBK) — No.33G (MBK)

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Micro Pitch/200(N·m)

LS200-MP



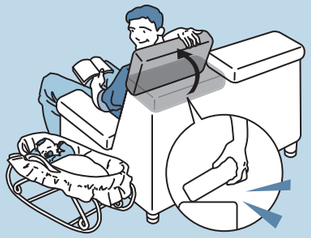
Packing Spec

Sets / Carton	15
Weight / Set	1.04kg
Weight / Carton	16.1kg
L×W×H/Carton(mm)	250×330×150

Model Name LS200-MP90L-32G

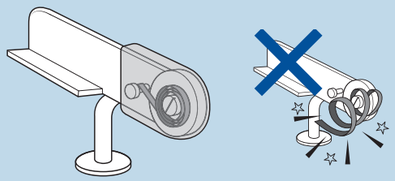
- LS200: Series
- MP: Micro Pitch
- 90: Movable Range
- L: Base Type
- 32G: Arm Type

Quieter Click



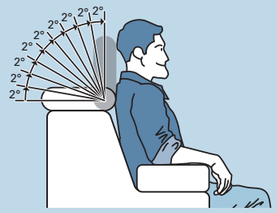
Operational noise is minimized.

Protected by Safety Plastic Cover



Safety design never to expose the inner parts outside

Micro Pitch

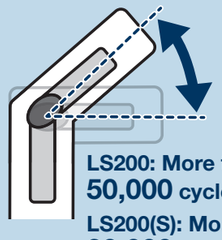


2° ultra fine pitch gear ensures better fit.

Durability

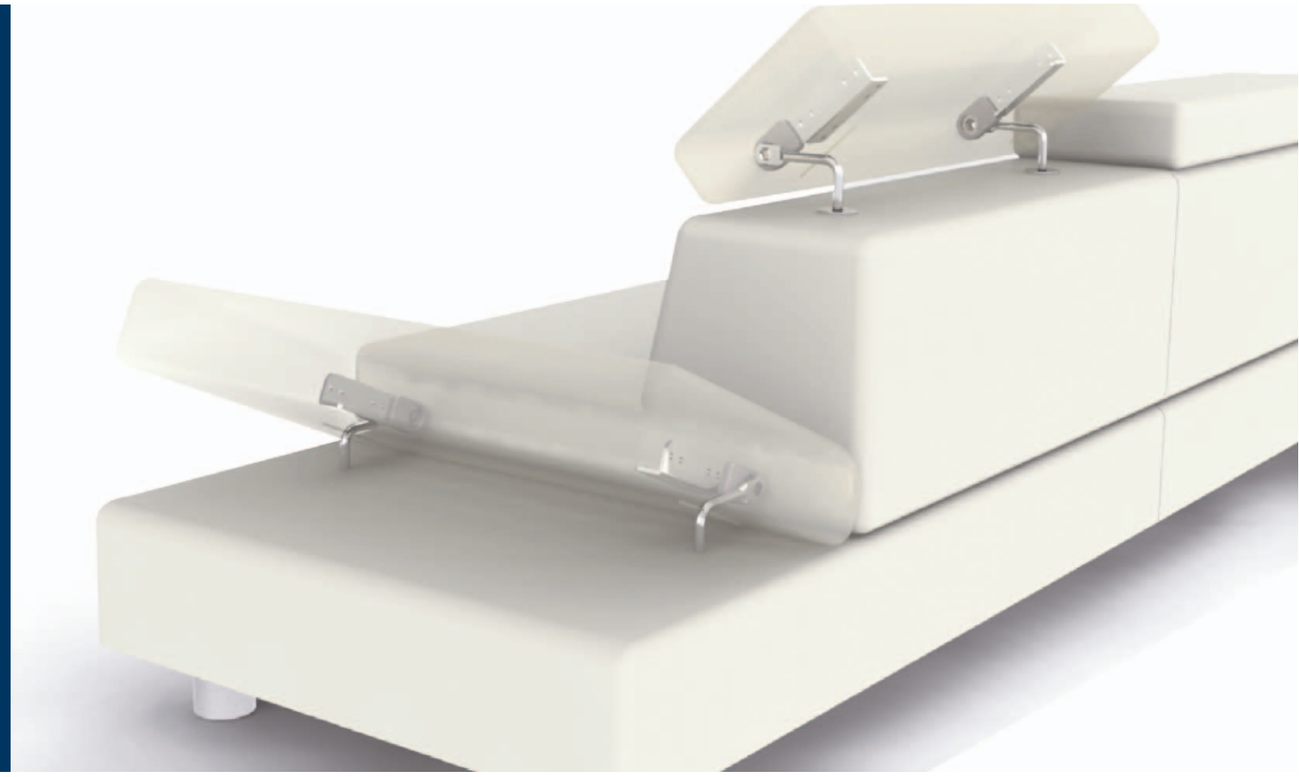


Repetition



LS200: More than 50,000 cycles

LS200(S): More than 30,000 cycles

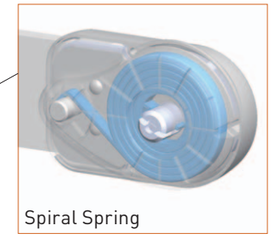


Spring Type

Model Name LS200(S)-MP90L-10

- LS200(S): Series
- MP: Micro Pitch
- 90: Movable Range
- L: Base Type
- 10: Arm Type





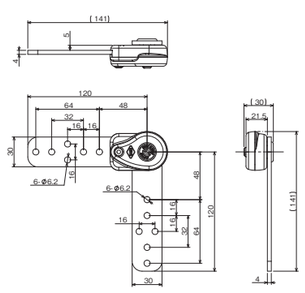
Spiral Spring

Specification

LS200(S)-MP90I-R11

No.R11:Zero position 90°
(No.11:Zero position 180°)

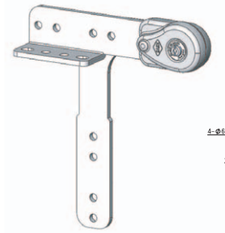


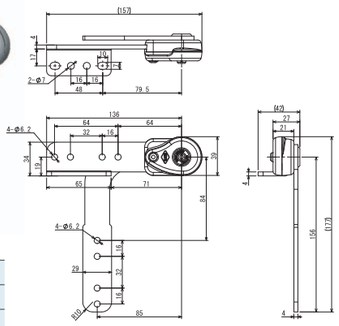


Packing Spec

Sets / Carton	15
Weight / Set	0.65kg
Weight / Carton	10.2kg
L×W×H/Carton(mm)	250×330×150

LS200(S)-MP90L-10





Packing Spec

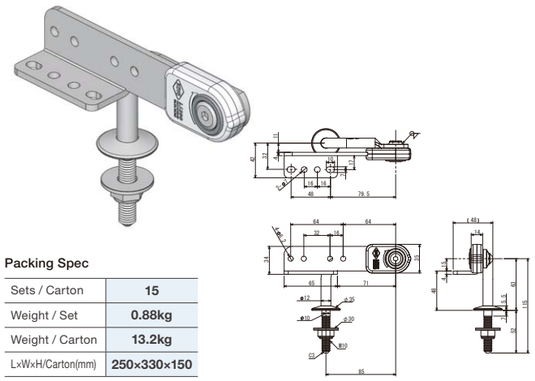
Sets / Carton	15
Weight / Set	0.9kg
Weight / Carton	13.9kg
L×W×H/Carton(mm)	250×330×150

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Model Name LS200-MP90L-32G
(Micro Pitch: MP90L; Base Type: L; Series: LS200; Movable Range: 32; Arm Type: G)

Specification

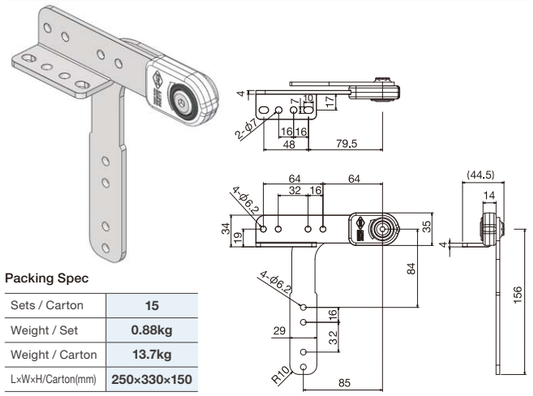
LS200-MP90L-32AF



Packing Spec

Sets / Carton	15
Weight / Set	0.88kg
Weight / Carton	13.2kg
L×W×H/Carton(mm)	250×330×150

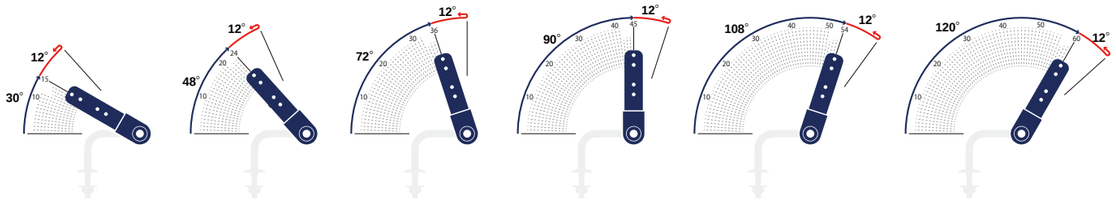
LS200-MP90L-10



Packing Spec

Sets / Carton	15
Weight / Set	0.88kg
Weight / Carton	13.7kg
L×W×H/Carton(mm)	250×330×150

Gear Steps with Movable Range

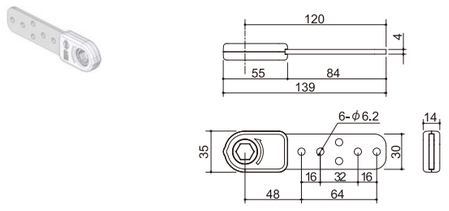


30° (15 steps) | 48° (24 steps) | 72° (36 steps) | 90° (45 steps) | 108° (54 steps) | 120° (60 steps)

Bases

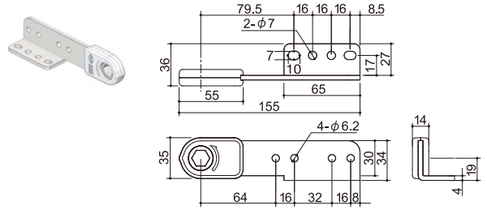
I-type

Finish : Unichrome plating



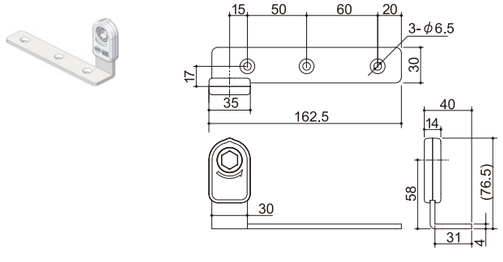
L-type

Finish : Unichrome plating



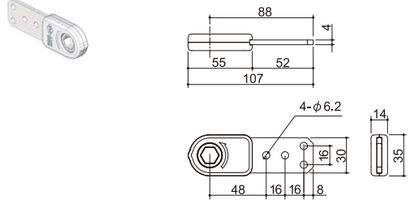
Z-type

Finish : Unichrome plating



IC-type

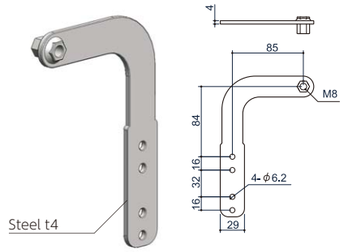
Finish : Unichrome plating



Arms

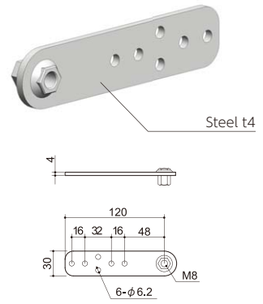
No.10

Finish : Chrome plating



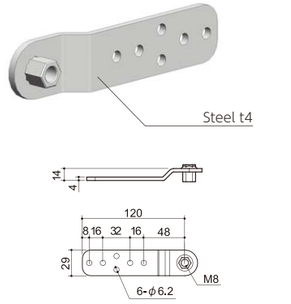
No.11

Finish : Unichrome plating

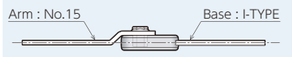


No.15

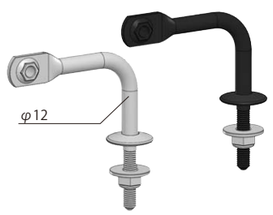
Finish : Unichrome plating

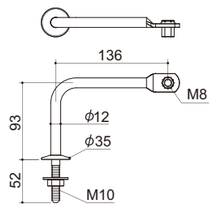


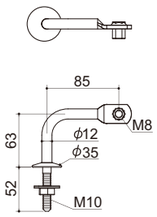
Combination with the I base e.g.)

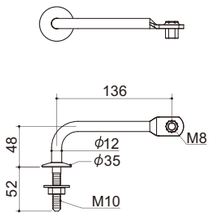


No. 31AF～33AF



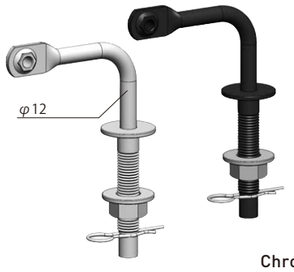


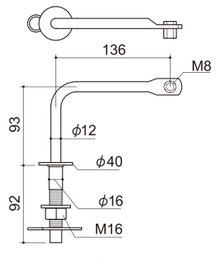


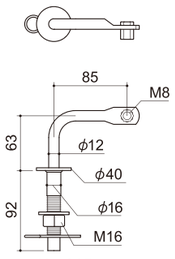


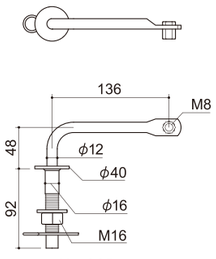
Chrome plating	No.31AF	No.32AF	No.33AF
Black finishing	No.31AF (MBK)	No.32AF (MBK)	No.33AF (MBK)

No. 31B～33B



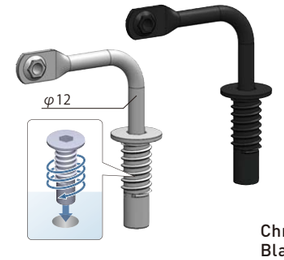


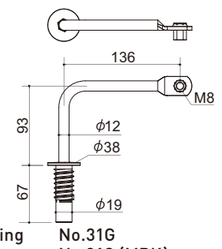


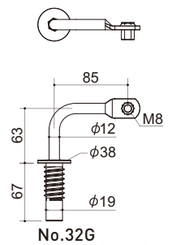


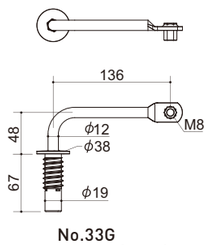
Chrome plating	No.31B	No.32B	No.33B
Black finishing	No.31B (MBK)	No.32B (MBK)	No.33B (MBK)

No. 31G～33G









Chrome plating	No.31G	No.32G	No.33G
Black finishing	No.31G (MBK)	No.32G (MBK)	No.33G (MBK)

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Micro Pitch/300(N·m)

LS300-MP

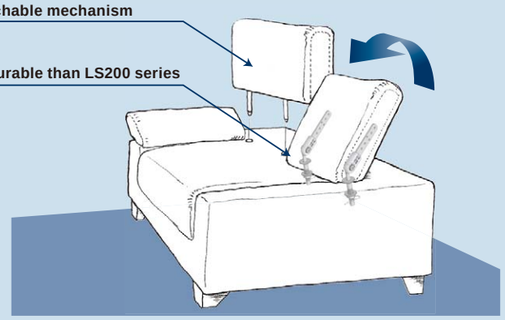


Packing Spec

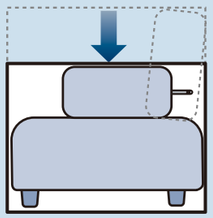
Sets / Carton	15
Weight / Set	1.02kg
Weight / Carton	15.8kg
L×W×H/Carton(mm)	250×330×150

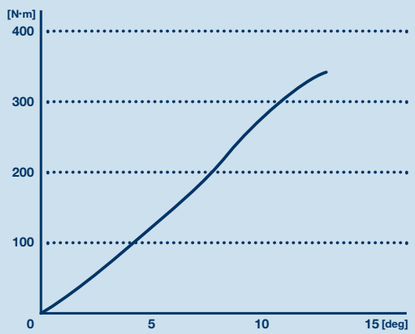
Model Name LS300-MP48I-40B

- LS300-MP: Series
- 48: Micro Pitch
- I: Base Type
- 40: Movable Range
- B: Arm Type



Compact packing saving your shipping cost

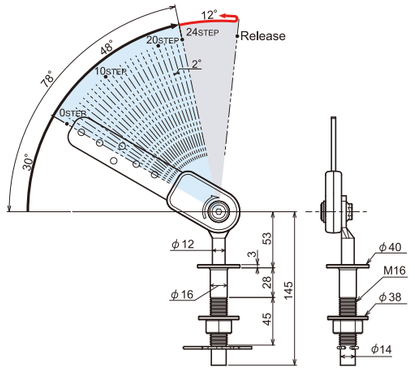




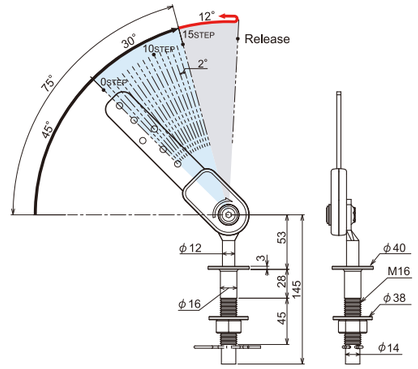
We started to load the torque until breakage of LS300-MP.
This graph shows the strength.

Specification

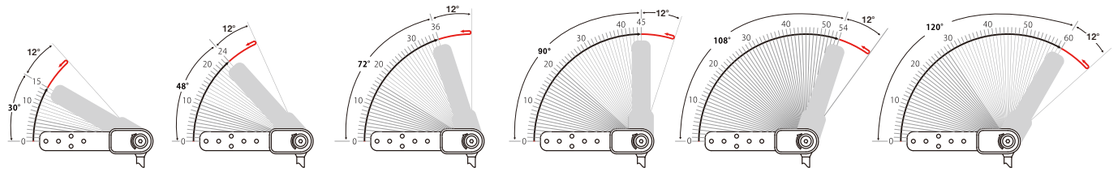
LS300-MP48I-40B



LS300-MP30I-41B



Gear Steps with Movable Range

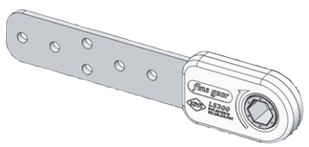


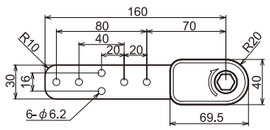
30° (15 steps) | 48° (24 steps) | 72° (36 steps) | 90° (45 steps) | 108° (54 steps) | 120° (60 steps)

Base

I-type

Finish : Unichrome plating



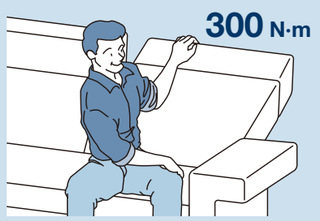


Micro Pitch



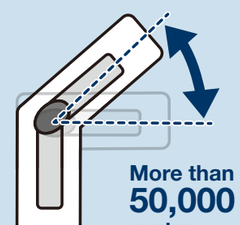
2° ultra fine pitch gear ensures better fit.

Durability



For 500 mm backrest, 120 kg is durable as one set (2 pcs).

Repetition



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

SOUND zero

Micro Pitch/220(N·m)/ Silent

ST250



ST250-90-90
(non-spring type)

Packing Spec

Pcs / Carton	50
Weight / Pc	0.29kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150

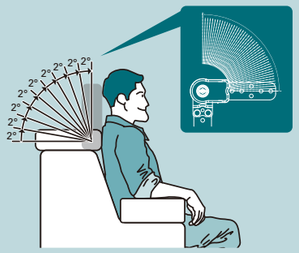
Model Name **ST250-90-90**
(Movable Range: 90 / Zero Position: 90 / Series: ST250)

"Silent Gear"



Angle adjustment is possible without operational noise.

Micro Pitch of 2° per Step.

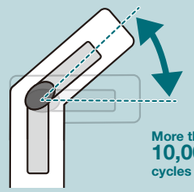


Durability

220 N·m



Repetition



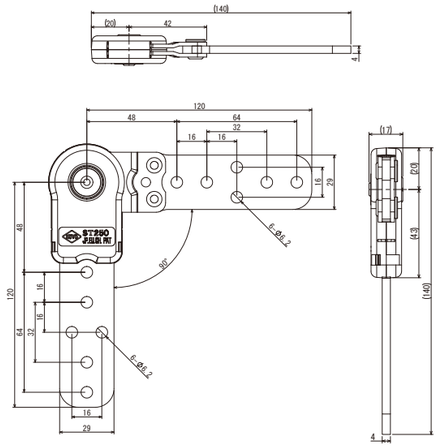
More than 10,000 cycles

*Durability equivalent to IS250.

Specification

ST250-90-90

Finish : Unichrome plating

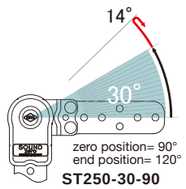


Packing Spec

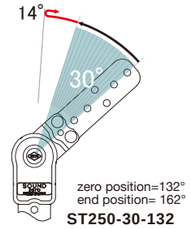
Pcs / Carton	50
Weight / Pc	0.29kg
Weight / Carton	15kg
L×W×H/Carton(mm)	250×330×150

Gear Steps with Movable Range

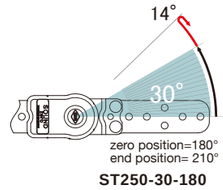
30° (15 steps)



zero position= 90°
end position= 120°
ST250-30-90

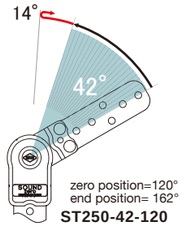


zero position=132°
end position= 162°
ST250-30-132



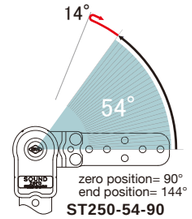
zero position=180°
end position= 210°
ST250-30-180

42° (21 steps)

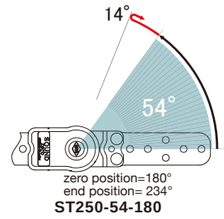


zero position=120°
end position= 162°
ST250-42-120

54° (27 steps)

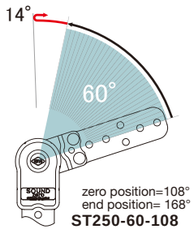


zero position= 90°
end position= 144°
ST250-54-90



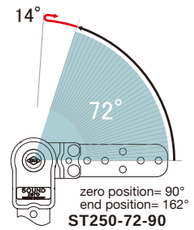
zero position=180°
end position= 234°
ST250-54-180

60° (30 steps)

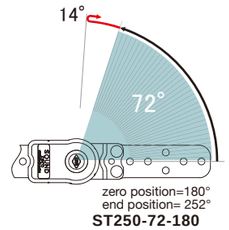


zero position=108°
end position= 168°
ST250-60-108

72° (36 steps)

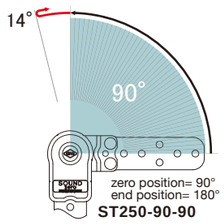


zero position= 90°
end position= 162°
ST250-72-90

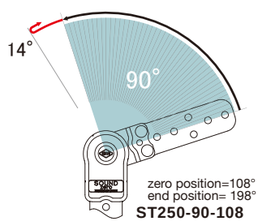


zero position=180°
end position= 252°
ST250-72-180

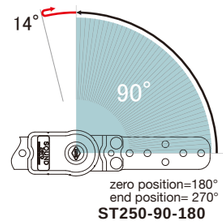
90° (45 steps)



zero position= 90°
end position= 180°
ST250-90-90

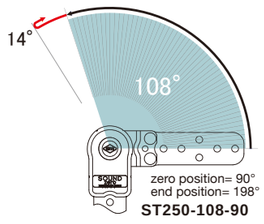


zero position=108°
end position= 198°
ST250-90-108



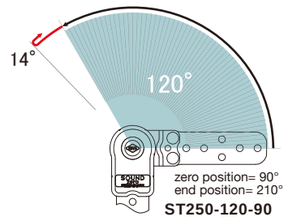
zero position=180°
end position= 270°
ST250-90-180

108° (54 steps)

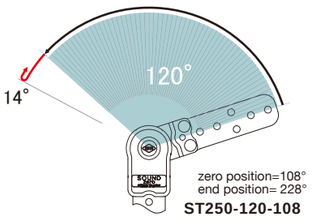


zero position= 90°
end position= 198°
ST250-108-90

120° (60 steps)



zero position= 90°
end position= 210°
ST250-120-90



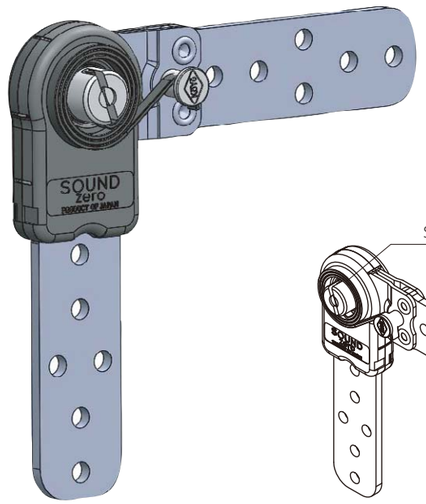
zero position=108°
end position= 228°
ST250-120-108

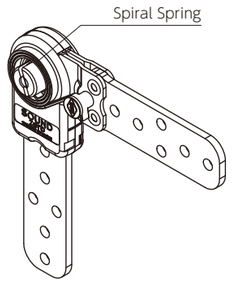
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

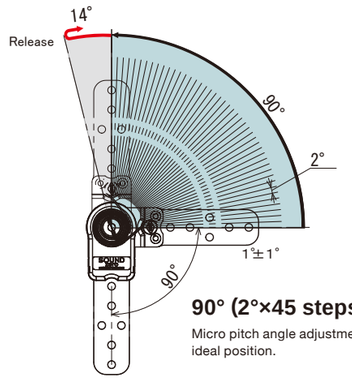
Model Name ST250-SS45-90-90
(Movable Range: 90; Zero Position: 90; Series: ST250; Spring Type: SS45)

ST250 Spring Type

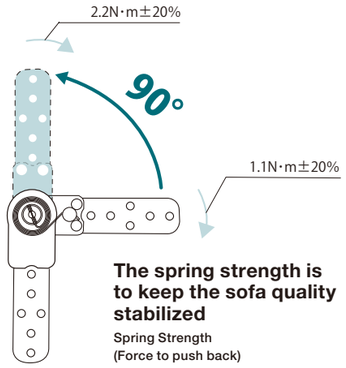
The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.





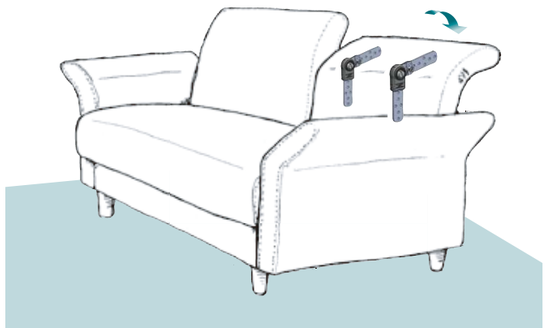


90° (2°×45 steps)
Micro pitch angle adjustment realizes your ideal position.



The spring strength is to keep the sofa quality stabilized
Spring Strength
(Force to push back)

The integrated spring prevents a pulling up of the cushion by the upholstery and pushes the cushion down, so it will rest in a flat position when released.



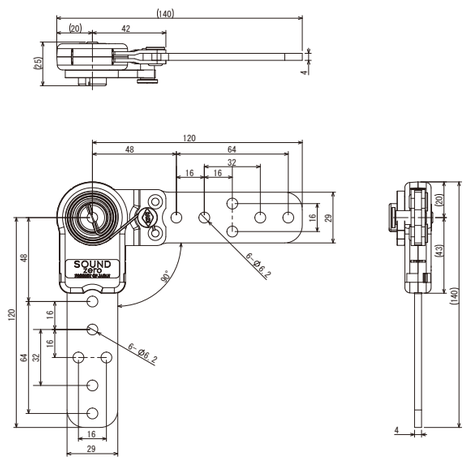
Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
20	0.65kg	13.3kg	250×330×150

Specification

ST250 Spring Type

Finish : Unichrome plating



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

ST Options

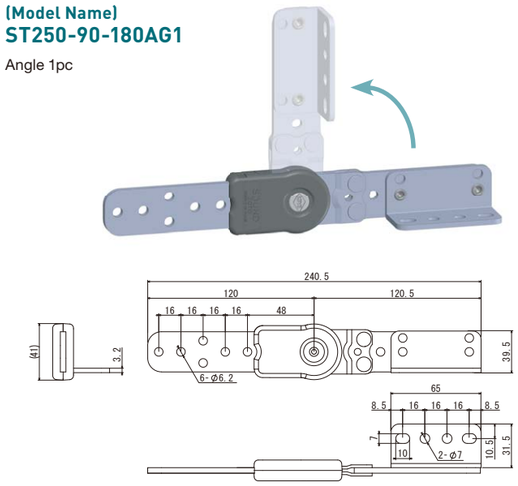
Angle Riveted Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.

(Model Name)
ST250-90-180AG1

Angle 1pc

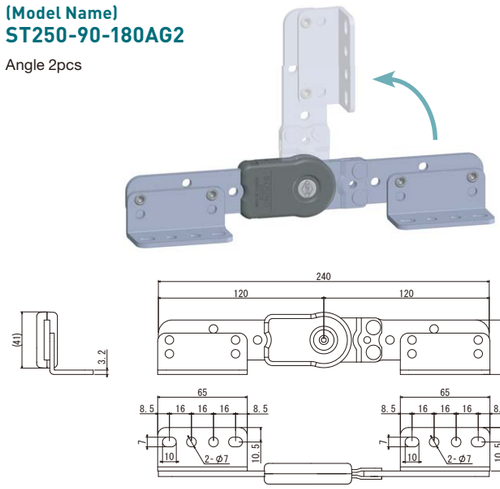


Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
25	0.8kg	20.5kg	250×330×150

(Model Name)
ST250-90-180AG2

Angle 2pcs



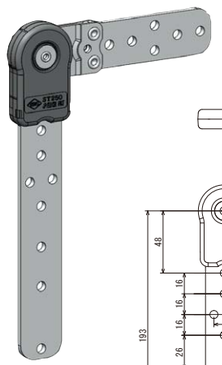
Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
20	0.93kg	19.1kg	250×330×150

Long Arm Type

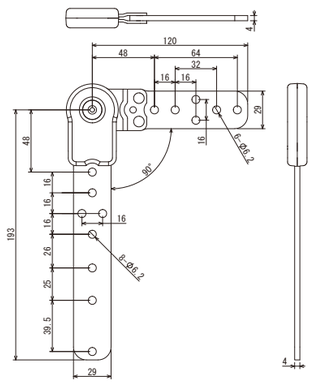
Finish : Unichrome plating

The available motion patterns for this model are the same as for the ST250 series.
Please refer to pages 28.



(Model Name)
ST250-L-90-90

This model can meet the requirements of a chair/ sofa frame where a longer arm is needed.



Packing Spec

Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
50	0.35kg	18kg	250×330×150

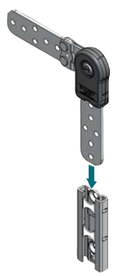
Socket

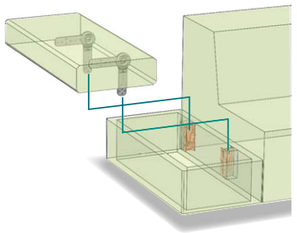
Finish : Unichrome plating



This is developed as a knock down fitting for headrests & armrests.
This socket allows quick and easy assembly of reclining parts.

One-touch operation
Just insert a gear into the socket





1.Easy to fix
2.Improving efficiency of assembly
3.Expansion of design patterns

Classic/250(N·m)

IS250

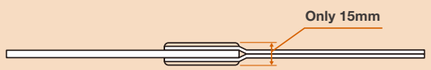


Packing Spec

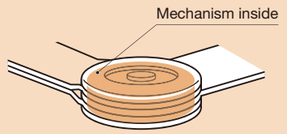
Pcs / Carton	50
Weight / Pc	0.30kg
Weight / Carton	15.5kg
L×W×H/Carton(mm)	250×330×105

Model Name IS250-12-90
(Step: 12 — Series: IS250 — Zero Position: 90)

Slim Design



Protection for Inner Mechanism



Durability & Repetition

Durability
250N·m

Repetition
More than
10,000 cycles



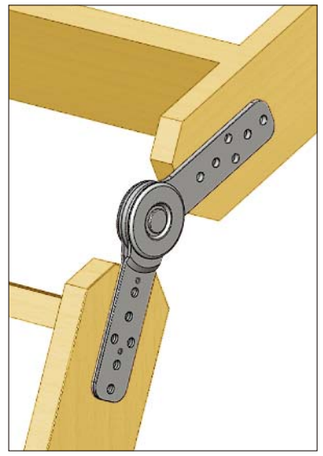
Fine Pitch Gear



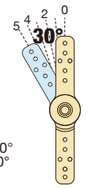
6° pitch 15 steps=90°

Ideal adjustment possible for headrest



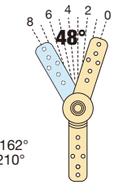


5 steps



IS250-5-180
zero position=180°
end position=210°

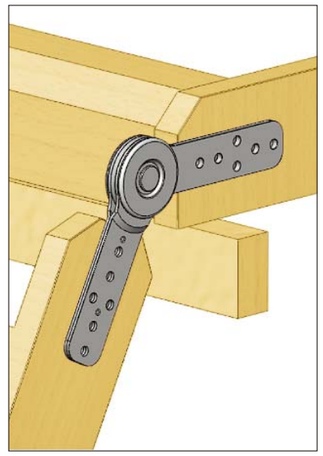
8 steps



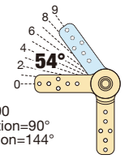
IS250-8-162
zero position=162°
end position=210°

Ideal for armrest



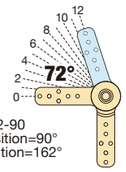


9 steps



IS250-9-90
zero position=90°
end position=144°

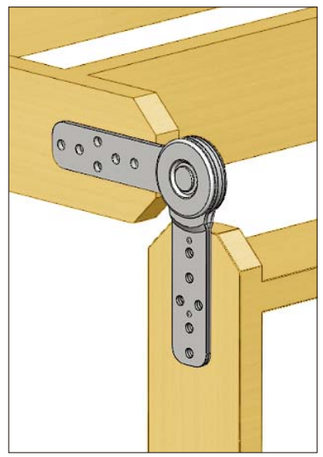
12 steps



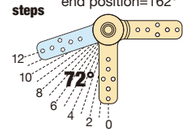
IS250-12-90
zero position=90°
end position=162°

Ideal for footrest

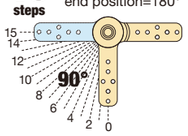




12 steps IS250-12-90
zero position=90°
end position=162°



15 steps IS250-15-90
zero position=90°
end position=180°



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Fittings to choose from many types

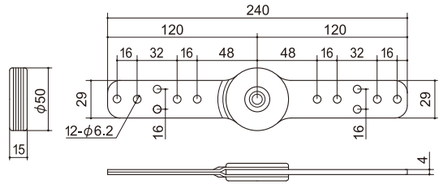
Model Name IS250-12-90 (Step: 12 · Series: IS250 · Zero Position: 90)

Specification

IS250-12-90

Finish : Unichrome plating



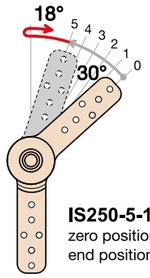


Packing Spec

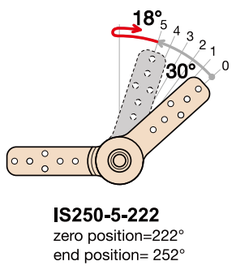
Pcs / Carton	50
Weight / Pc	0.30kg
Weight / Carton	15.5kg
L×W×H/Carton(mm)	250×330×105

Gear Steps with Movable Range

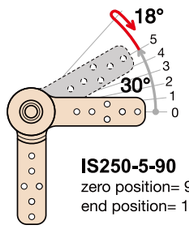
5 steps (30°)



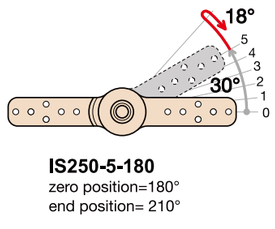
IS250-5-132
zero position=132°
end position= 162°



IS250-5-222
zero position=222°
end position= 252°

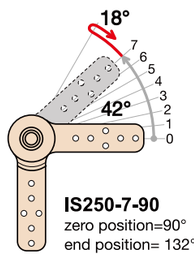


IS250-5-90
zero position= 90°
end position= 120°

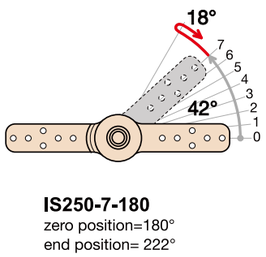


IS250-5-180
zero position=180°
end position= 210°

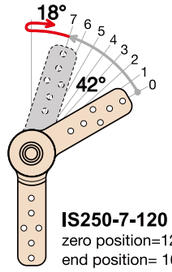
7 steps (42°)



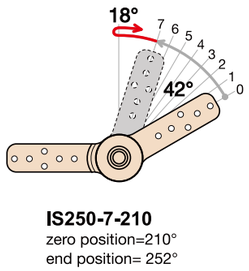
IS250-7-90
zero position=90°
end position= 132°



IS250-7-180
zero position=180°
end position= 222°

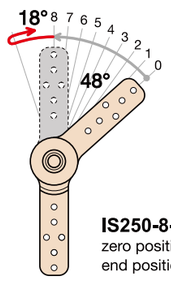


IS250-7-120
zero position=120°
end position= 162°

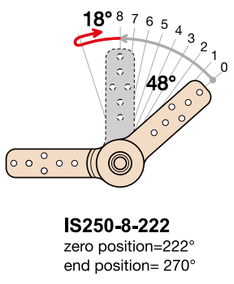


IS250-7-210
zero position=210°
end position= 252°

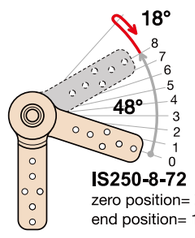
8 steps (48°)



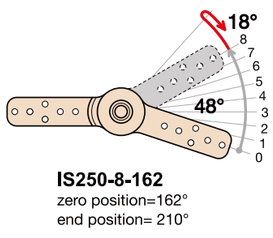
IS250-8-132
zero position= 132°
end position= 180°



IS250-8-222
zero position=222°
end position= 270°

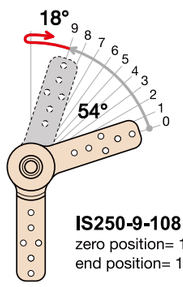


IS250-8-72
zero position= 72°
end position= 120°

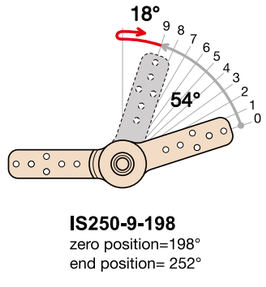


IS250-8-162
zero position=162°
end position= 210°

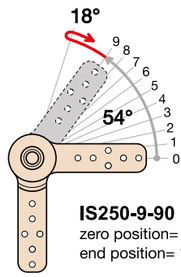
9 steps (54°)



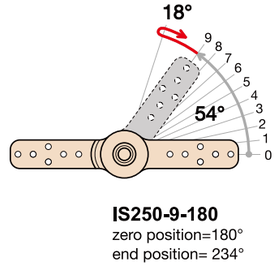
IS250-9-108
zero position= 108°
end position= 162°



IS250-9-198
zero position=198°
end position= 252°

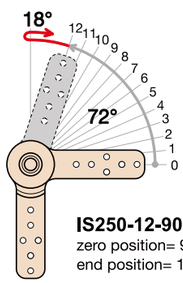


IS250-9-90
zero position= 90°
end position= 144°

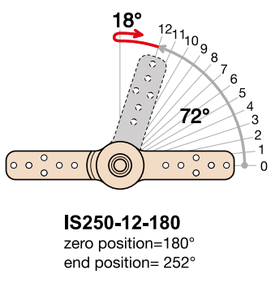


IS250-9-180
zero position=180°
end position= 234°

12 steps (72°)

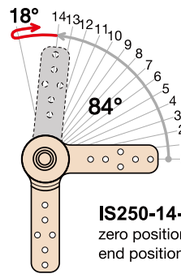


IS250-12-90
zero position= 90°
end position= 162°

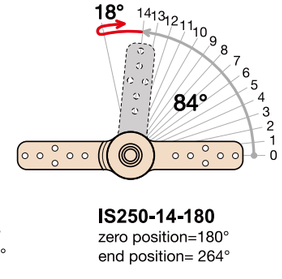


IS250-12-180
zero position=180°
end position= 252°

14 steps (84°)

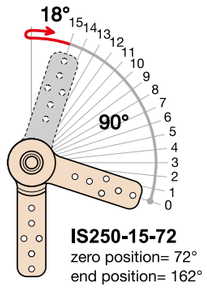


IS250-14-90
zero position= 90°
end position= 174°

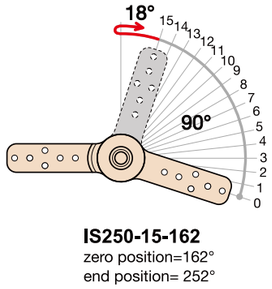


IS250-14-180
zero position=180°
end position= 264°

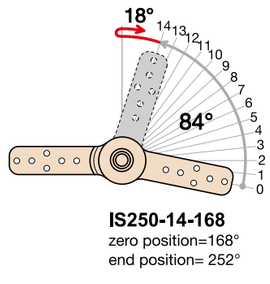
15 steps (90°)



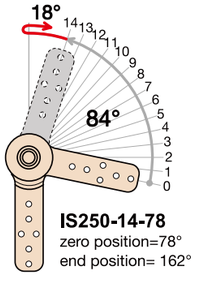
IS250-15-72
zero position= 72°
end position= 162°



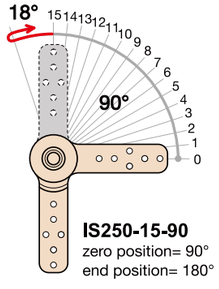
IS250-15-162
zero position=162°
end position= 252°



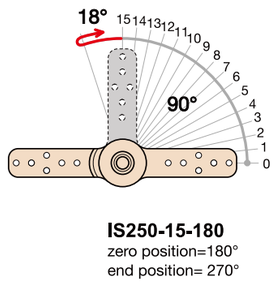
IS250-14-168
zero position=168°
end position= 252°



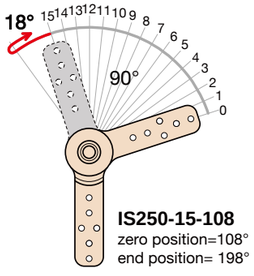
IS250-14-78
zero position=78°
end position= 162°



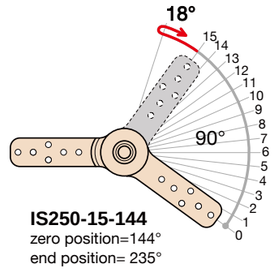
IS250-15-90
zero position= 90°
end position= 180°



IS250-15-180
zero position=180°
end position= 270°



IS250-15-108
zero position=108°
end position= 198°



IS250-15-144
zero position=144°
end position= 235°

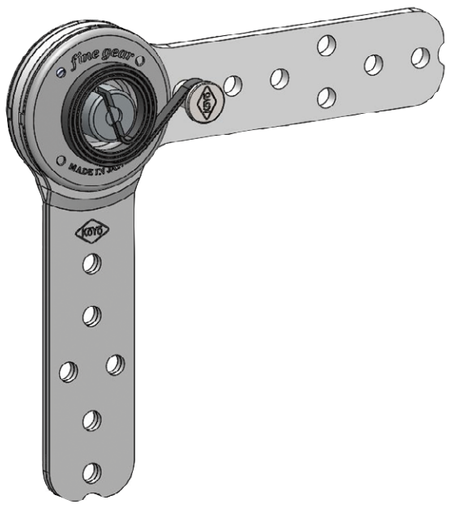
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

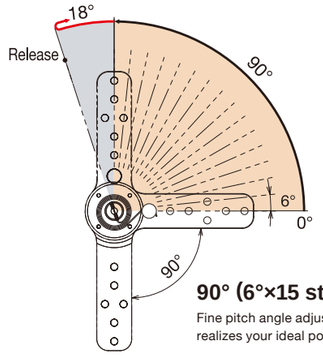
Fittings to choose from many types

Model Name IS250-SS45-15-90
(Step: 15 · Zero Position: 90 · Series: IS250 · Spring Type: SS45)

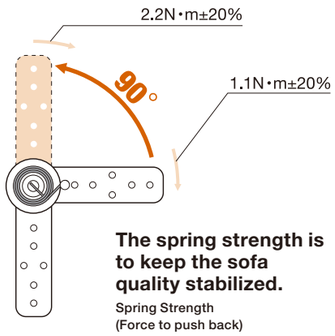
IS250 Spring Type

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.



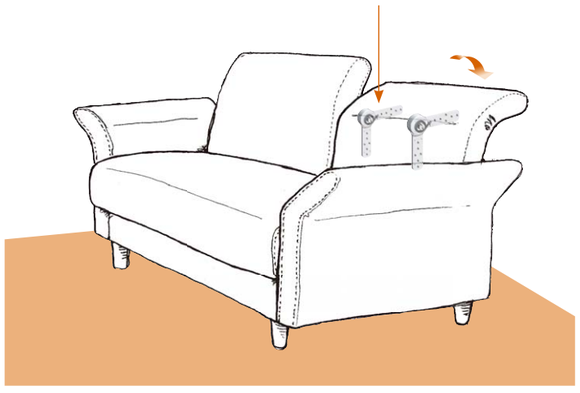


90° (6°×15 steps)
Fine pitch angle adjustment realizes your ideal position.



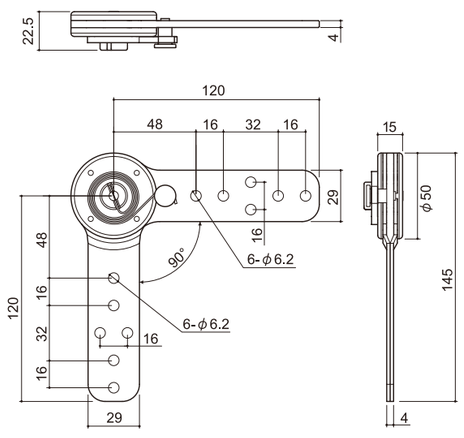
The spring strength is to keep the sofa quality stabilized.
Spring Strength
(Force to push back)

The integrated spring prevents a pulling up of the cushion by the upholstery and pushes the cushion down, so it will rest in a flat position when released.



IS250-SS45-15-90

Finish : Unichrome plating



Packing Spec

Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
40	0.33kg	13.7kg	250×330×105

IS Options

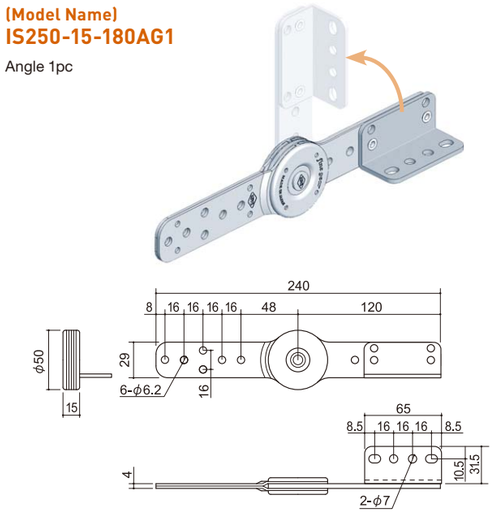
Angle Riveted Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.

(Model Name)
IS250-15-180AG1

Angle 1pc

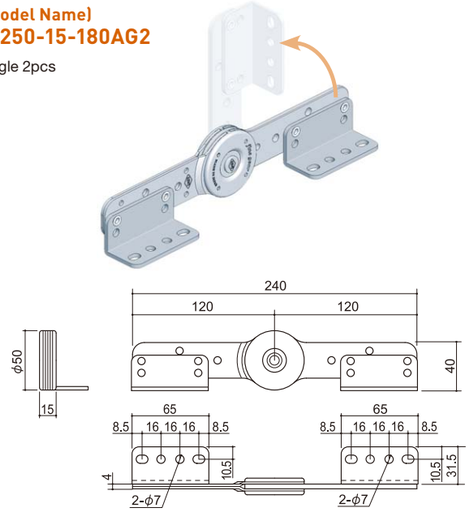


Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
25	0.78kg	20kg	250×330×150

(Model Name)
IS250-15-180AG2

Angle 2pcs



Packing Spec

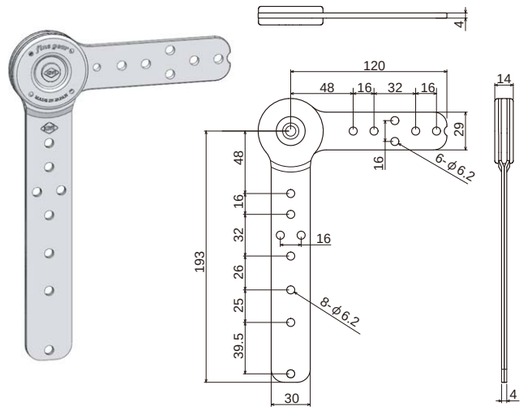
Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
40	0.48kg	19.7kg	250×330×150

Long Arm Type

Finish : Unichrome plating

The available motion patterns for this model are the same as for the IS250 series.
Please refer to the pages 33-34.

(Model Name)
IS250-L-15-90



Packing Spec

Pcs / Carton	Weight / Pc	Weight / Carton	L×W×H/Carton(mm)
50	0.38kg	19.5kg	250×330×150

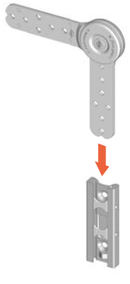
Socket

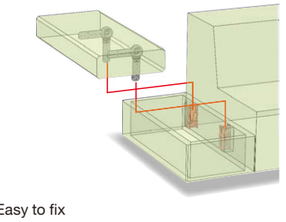
Finish : Unichrome plating



This is developed as a knock down fitting for headrests & armrests.
This socket allows quick and easy assembly of reclining parts.

One-touch operation
Just insert a gear into the socket





1.Easy to fix
2.Improving efficiency of assembly
3.Expansion of design patterns

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Fitting for heavier load/ 450(N·m)

IS450Y

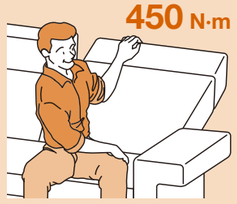


Packing Spec

Pcs / Carton	40
Weight / Pc	0.5kg
Weight / Carton	20.5kg
L×W×H/Carton(mm)	250×330×150

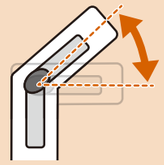
Model Name **IS450Y-SS45-12-90**
(Series: IS450Y; Spring Type: SS45; Step: 12; Zero Position: 90)

Durability



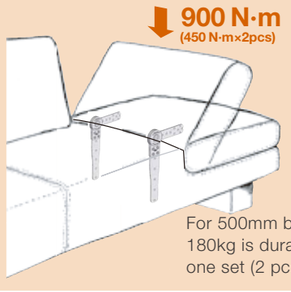
*Only the 15 steps version has 15% lower durability.

Repetition



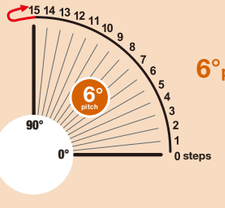
More than **10,000 cycles**

Strength



For 500mm backrest, 180kg is durable as one set (2 pcs).

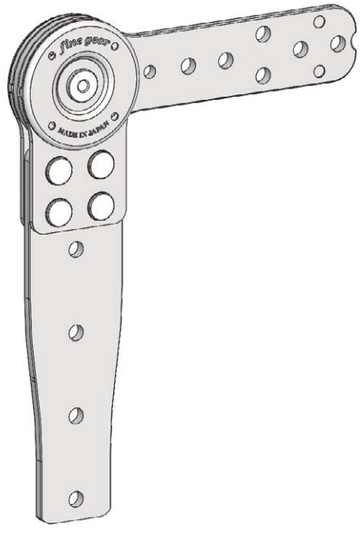
Fine Pitch Gear

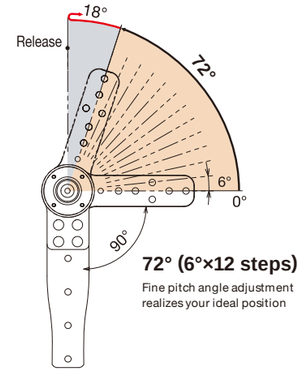


6°pitch 15 steps=90°

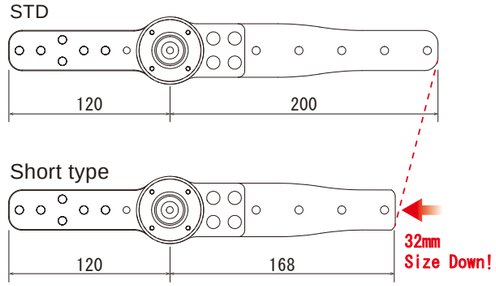
IS450Y Short Type

Model Name **IS450Y-12-90(S)**
(Series: IS450Y; Step: 12; Zero Positon: 90; Short type: S)





72° (6°×12 steps)
Fine pitch angle adjustment realizes your ideal position



Being shorter fits more into your sofa frame.



Ideal for armrest



Ideal for backrest



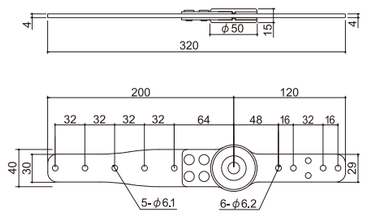
Ideal for footrest

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Specification

IS450Y-12-180

Finish : Unichrome

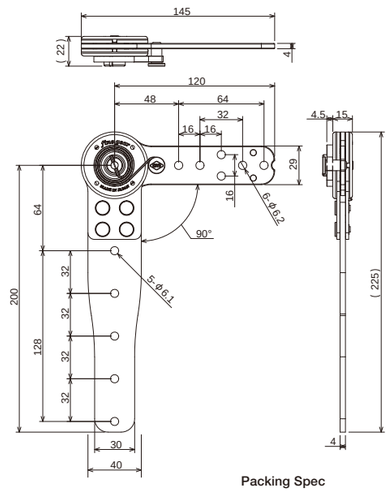


Packing Spec

Pcs / Carton	50
Weight / Pc	0.46kg
Weight / Carton	23.5kg
LxWxH/Carton(mm)	250×330×150

IS450Y-SS45-12-90

Finish : Unichrome

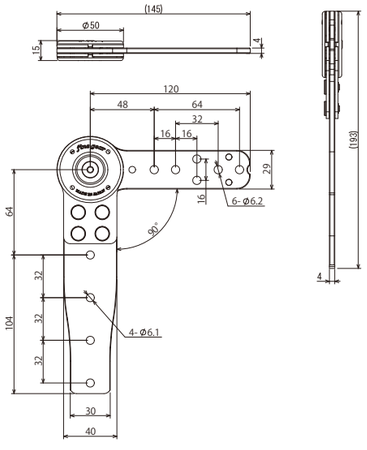


Packing Spec

Pcs / Carton	40
Weight / Pc	0.5kg
Weight / Carton	20.5kg
LxWxH/Carton(mm)	250×330×150

IS450Y-12-90(S)

Finish : Unichrome

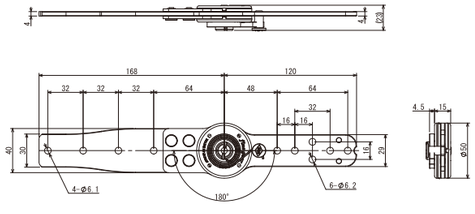


Packing Spec

Pcs / Carton	50
Weight / Pc	0.44kg
Weight / Carton	22kg
LxWxH/Carton(mm)	250x330x150

IS450Y-SS45-12-180(S)

Finish : Unichrome

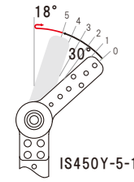


Packing Spec

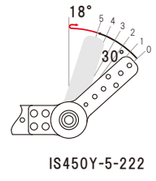
Pcs / Carton	40
Weight / Pc	0.44kg
Weight / Carton	17.6kg
LxWxH/Carton(mm)	250x330x150

Gear Steps with Movable Range

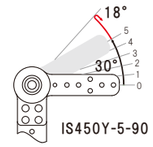
5 steps (30°)



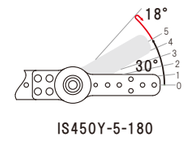
IS450Y-5-132



IS450Y-5-222

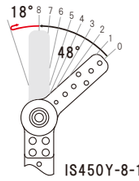


IS450Y-5-90

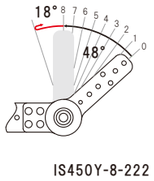


IS450Y-5-180

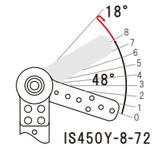
8 steps (48°)



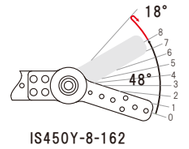
IS450Y-8-132



IS450Y-8-222

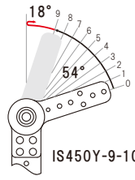


IS450Y-8-72

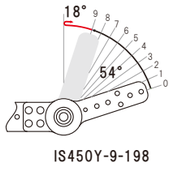


IS450Y-8-162

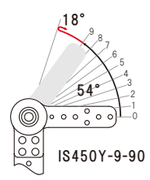
9 steps (54°)



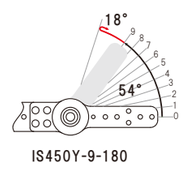
IS450Y-9-108



IS450Y-9-198

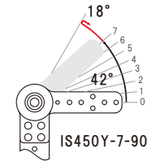


IS450Y-9-90

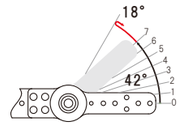


IS450Y-9-180

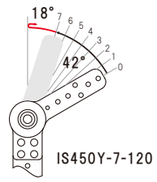
7 steps (42°)



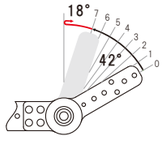
IS450Y-7-90



IS450Y-7-180

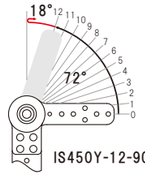


IS450Y-7-120

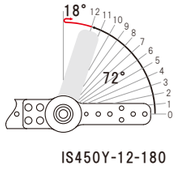


IS450Y-7-210

12 steps (72°)

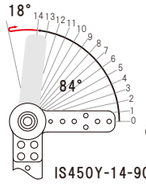


IS450Y-12-90

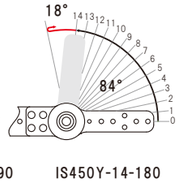


IS450Y-12-180

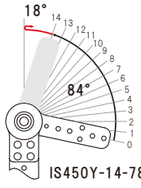
14 steps (84°)



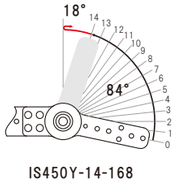
IS450Y-14-90



IS450Y-14-180

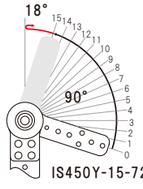


IS450Y-14-78

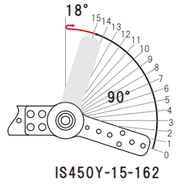


IS450Y-14-168

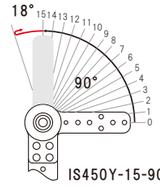
15 steps (90°)



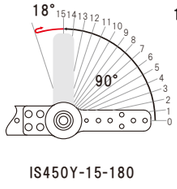
IS450Y-15-72



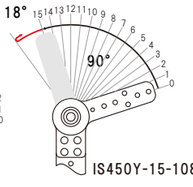
IS450Y-15-162



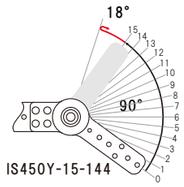
IS450Y-15-90



IS450Y-15-180



IS450Y-15-108



IS450Y-15-144

Dimensional data not binding. We reserve the right to alter specifications without prior notice.

+50mm Stretch/150(N·m)

IS150T

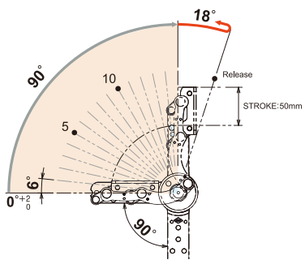


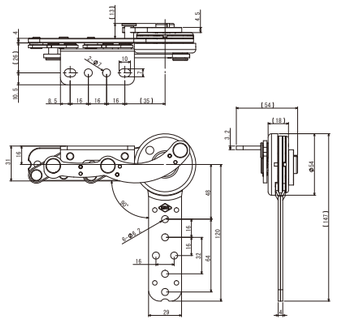
IS150T-SS45-15-90

Durability: 150N·m
Finish: Unichrome

Model Name
IS150T-15-90
(non-spring type)

IS150T-SS45-15-90
(spring type)





Packing Spec for IS150T-SS45-15-90

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
20	1.07kg	21.4kg	250×330×180

+80mm Stretch/150(N·m)

IS150LT

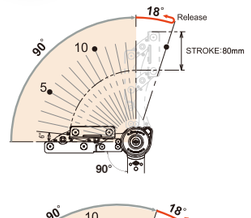


IS150LT-L-SS45-15-108

Durability: 150N·m
Finish: Unichrome

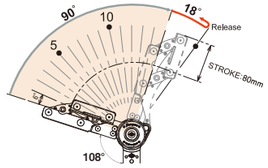
Model Name
IS150LT-L-15-90
(non-spring type)

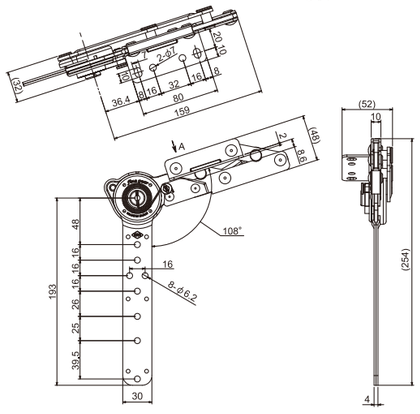
IS150LT-L-SS45-15-90
(spring type)



Model Name
IS150LT-L-15-108
(non-spring type)

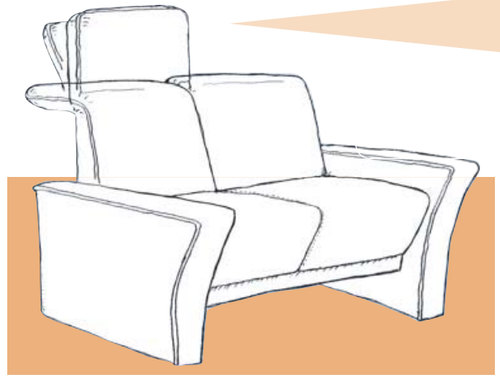
IS150LT-L-SS45-15-108
(spring type)



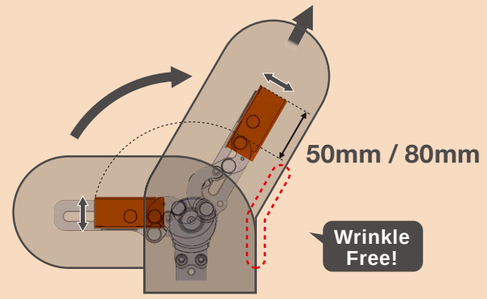


Packing Spec for IS150LT-L-SS45-15-90

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
10	1.5kg	15.5kg	250×330×180

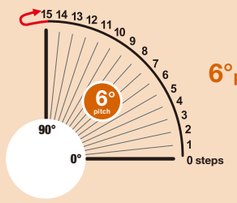


Stroke
50mm(IS150T) / 80mm(IS150LT)



When moving the gear, the angle plate slides up 50mm / 80mm which prevents the fabric from wrinkling.

Fine Pitch Gear



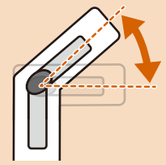
6°pitch15 steps=90°

Durability

Durability
150N·m

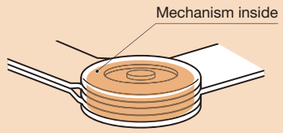


Repetition



More than
10,000 cycles

Protection for Inner Mechanism



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

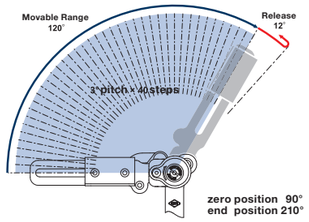
Micro Pitch/100(N·m)/ +50mm Stretch

LS100-MP-TR

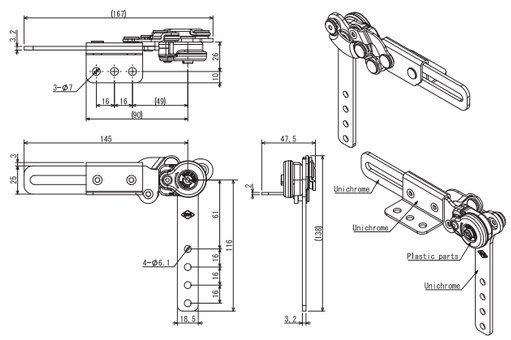


Durability: 100N·m
Finish: Unichrome

Model Name
LS100(S)-MP120TR-TA01(90)



120°(40 steps)



Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
15	0.6kg	9.5kg	250×330×150

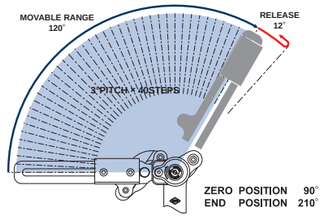
Micro Pitch/100(N·m)/ +80mm Stretch

LS100-MP-LT

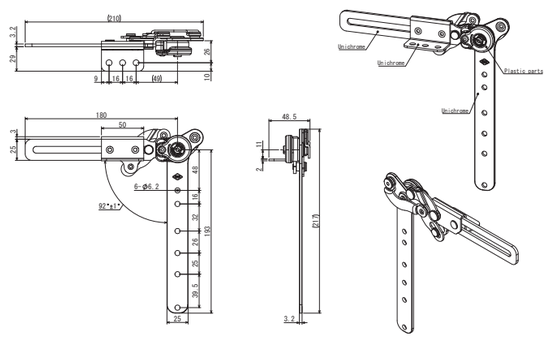


Durability: 100N·m
Finish: Unichrome

Model Name
LS100(S)-MP120LT-LTA01(90)



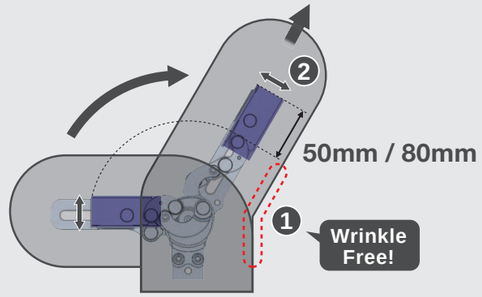
120°(40 steps)



Packing Spec

Sets / Carton	Weight / Set	Weight / Carton	L×W×H/Carton(mm)
10	0.8kg	8.5kg	250×330×150

Stroke
(50mm(LS100-MP-TR)) / 80mm(LS100-MP-LT)



1. When moving the gear, the angle plate slides up 50mm / 80mm which prevents the fabric from wrinkling.
2. The angle plate slides along the gear base without extending its width. (LS100-MP-TR・LS100-MP-LT)

Movable Range 120°(LS100-MP-TR/LS100-MP-LT)



Movable Range 90°

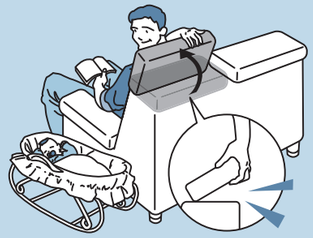


Movable Range 120°

Create the comfortable angle

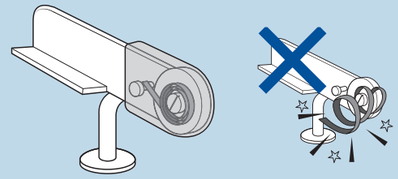
You can easily adjust the angle of the headrest to your favorite position for reading or watching TV.

Quieter Click



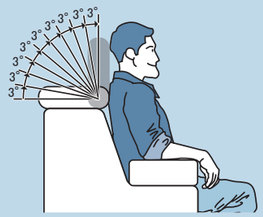
Operational noise is minimized.

Protected by Safety Plastic Cover



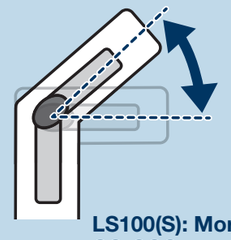
Safety design never to expose the inner parts outside

Micro Pitch



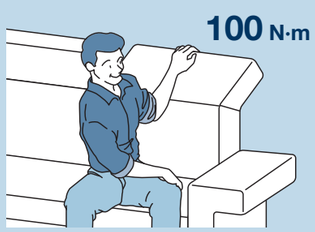
3° ultra fine pitch gear ensures better fit.

Repetition



LS100(S): More than 20,000 cycles

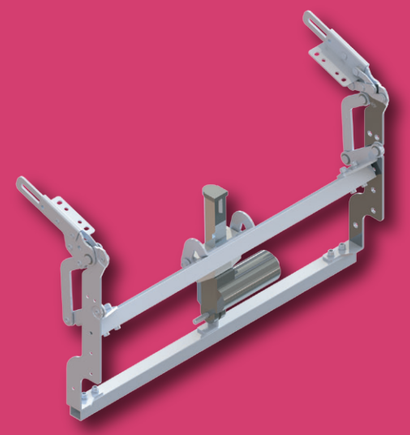
Durability



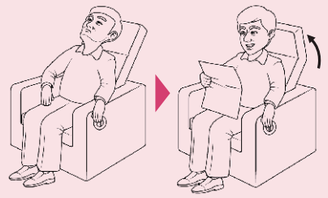
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Motorized Angle Adjustable Gear

EL-02H



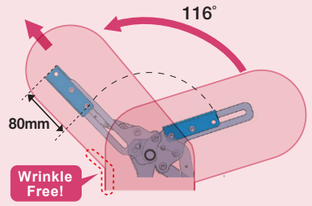
Adjust the angle of the headrest by just pushing a button



Motorized adjustment of the headrest

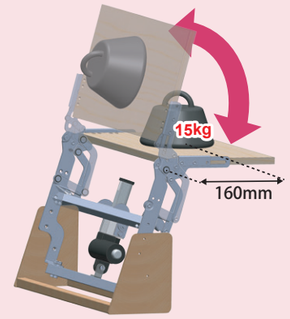
You can easily adjust
the angle of the back and headrest to
your favorite position for reading or watching TV.

Stroke 80mm



When moving the gear, the angle plate slides up 80mm,
which prevents the fabric from wrinkling.

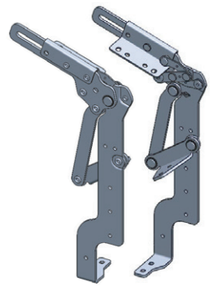
Test Data



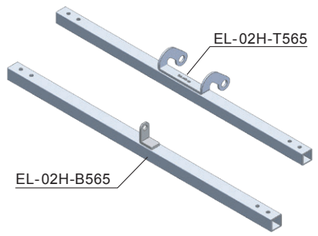
25,000 cycles while loading 15kg weight at 160mm from rotary axis.

Mechanical Components

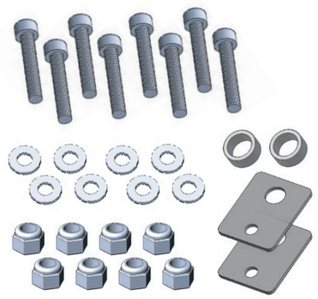
EL-02H
arm parts/pair



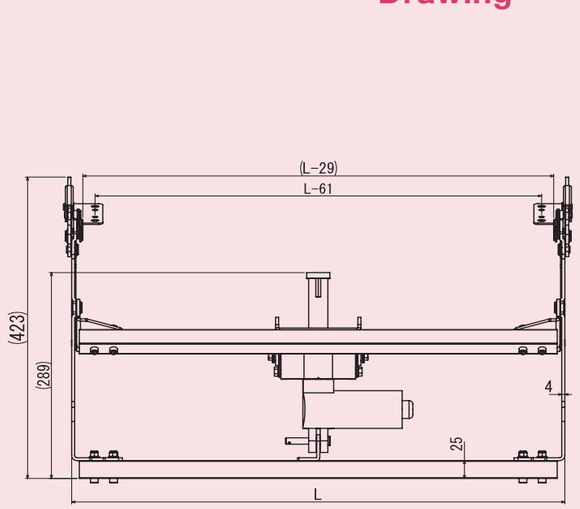
EL-02H2-T565 (641·680·791)
EL-02H2-B565 (641·680·791)
Joint Pipe

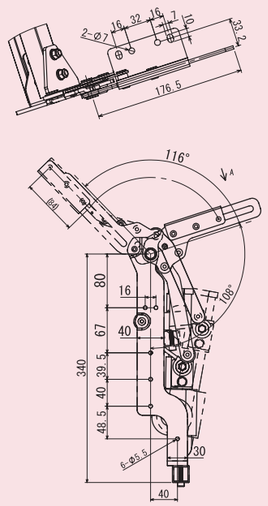


EL-02H2-AC
accessory



Drawing



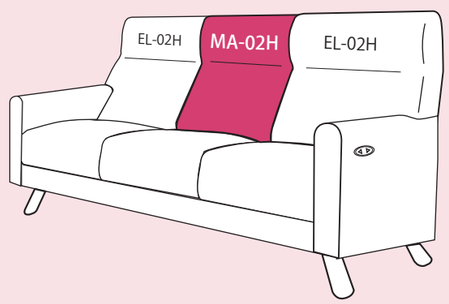


Manual Angle Adjustable Gear

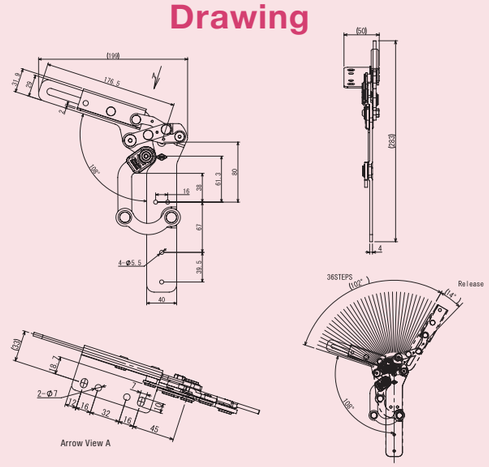
MA-02H



For 3 seaters' sofa, you can locate the MA (manual) model between the EL (electric) ones, enabling manual adjustment in the same motion as EL-02H.



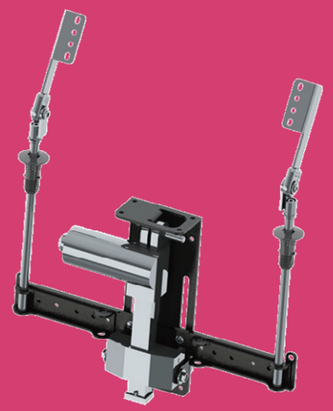
Drawing



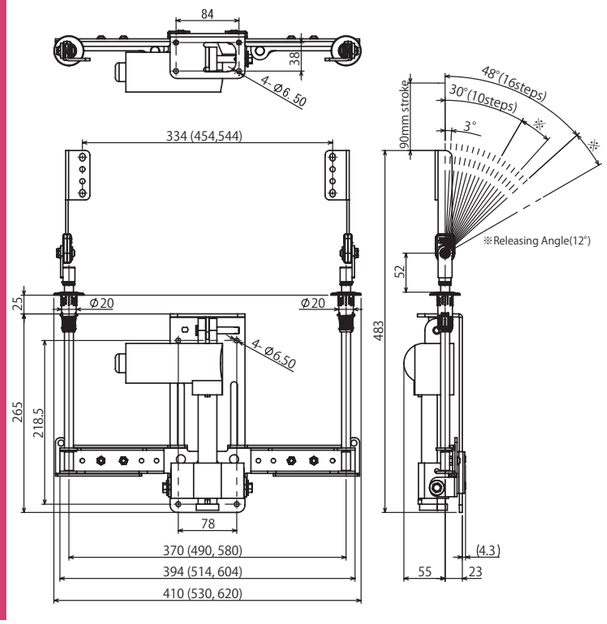
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Motorized Lift Up Mechanism

EL-03H



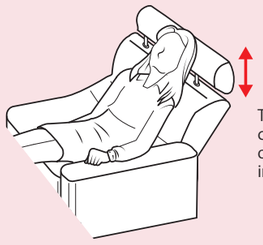
Specification



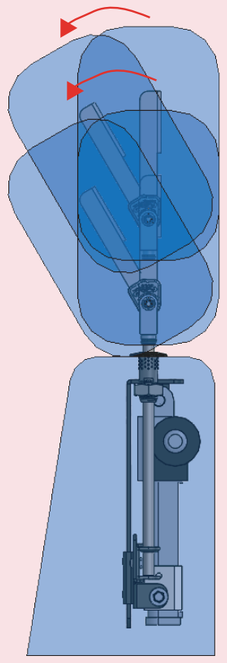
Movability



Angle adjustment is possible.
You can choose your desired fitting among the options.
Please refer to the chart.



The height can be controlled by operation of the button installed in the sofa.



The angle can adjust easily by one hand.

Height adjustment by motorized at most 90 mm.

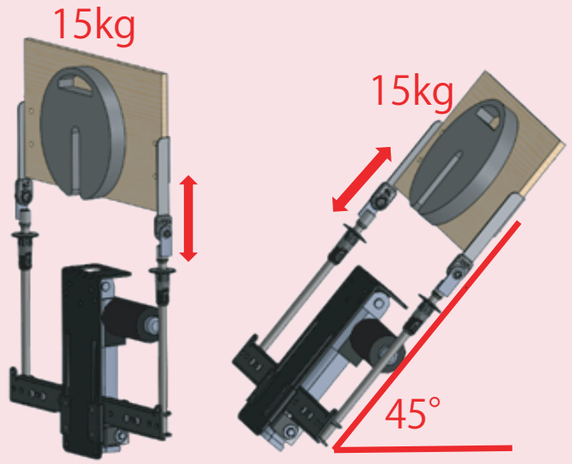
Dimensional data not binding. We reserve the right to alter specifications without prior notice.

Specification

Load Test

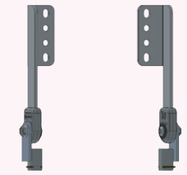
20,000 cycles passed while loading 15Kg weight in vertical motion , and at 45 degree setting.

No unusual sound, or no irregular vibration occurs.

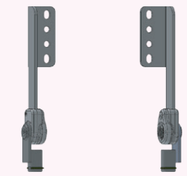


Optional Angle Adjustable Parts

LS100-MP30L FOR EL-03H or LS100-MP48L FOR EL-03H

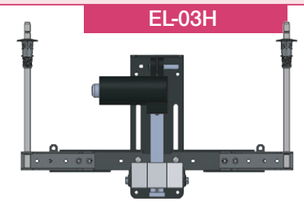


LS100(S)-MP30L FOR EL-03H or LS100(S)-MP48L FOR EL-03H



Lift Up Mechanism

EL-03H



Motorized

Electric Accesories

EL-03H-ACT
Linear actuator



EL-01H-PA
Power adaptor



EL-01H-PC
Power cable



EL-01H-CC
Connection cable



EL-01H-YC
Split cable



EL-01H-BA
Plastic oval handset



EL-01H-BB
Aluminium oval handset



EL-01H-BC
Soft touch handset



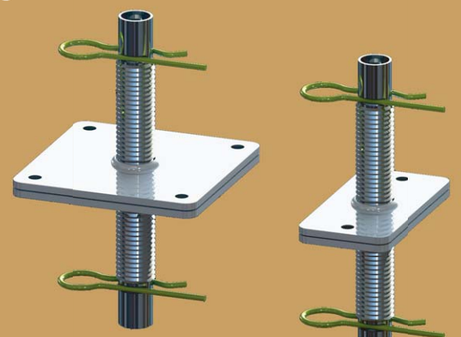
Detachable Support Fitting for Your Sofa Assembly

MS-2

Product Spec

Finish	Unichrome
Weight / Pc (MS-2L)	0.45kg
Weight / Pc (MS-2S)	0.3kg

Model Name MS-2L
(Series / Large or small)

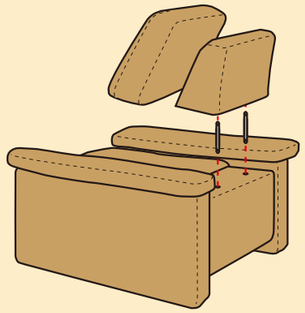


MS-2L

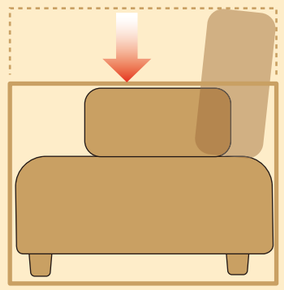


MS-2S

Easier assembly in your factory



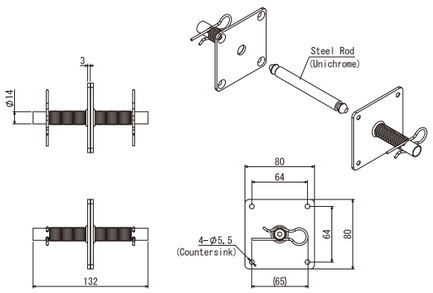
Compact packing, saving your shipping cost



Drawing

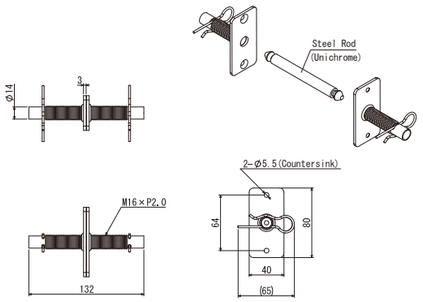
MS-2L

Finish : Unichrome plating



MS-2S

Finish : Unichrome plating



Dimensional data not binding. We reserve the right to alter specifications without prior notice.

KOYO Global Network



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